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THE CENTENARY OF THEOPHILANTHROPY.

BY DR. MONCURE D. CONWAY.

ON JANUARY 16, 1796, the Theophilanthropists held their first public meeting. It was in the chapel of an ancient hospital (St. Catharine), which stood at the corner of St. Denis and Lombard street, Paris. Early in the Revolution a part of the hospital had been assigned to penitent "Magdalens" (so miscalled), and another part to the blind. The teacher of the blind was a Catholic of Russian origin named Haüy, and it was he who made arrangements for the Theophilanthropists, whose first public meeting seems to have been addressed by Thomas Paine. There, amid the blind and the ostracised, was cradled this religion of blended love for God and Man.

After the reign of terror was passed, after the tempest, and earthquake, and fire, this still small voice made itself audible. In the two previous years there often met in a small café a little company of leading men who during the terror had tried to stem the bloodshed; they had now come from their prisons and refuges to find most of their old homes and haunts empty, their friends dead or dispersed. Like survivors from a foundered ship, stranded on some strange island, they made more intimate acquaintance, and, with whatever differences of opinion, were united by memories of a common martyrdom, and by their common love of humanity. There was the long-imprisoned Thomas Paine in close friendship with the democratic Bishop Grégoire, and the devout Bernardin St. Pierre heart to heart with the rationalist Dupuis, the socialistic nobleman De Bonneville, the poet Mercier. Their old theologic and other partition walls had crumbled under the revolution. Their common enthusiasm was now for the religion of humanity, and this was diffusing itself among many families. But meanwhile parents

were lamenting that they had no church in which their families might cultivate the higher religion. This want led to several gatherings in private houses, in September 1796, and in that month a Manual of Theophilanthropy was compiled by M. Chemin-Depontès. This was followed in the autumn by a small book of hymns and canticles. The first hymn—I must translate in prose—begins:

"O God, whose bounty and greatness the Universe proclaims,
Thou who hast given us life, receive the incense of our hearts."

This is followed by a canticle beginning, "Descend from the Heavens, Divine Tolerance," whose closing lines are:

"Never hate; for hatred is grievous,
It poisons and withers our spirit.
If the terrible tongue of an evil man
Sows thy days with thorns and vexations,
Lower not thy generous soul,
Though reason permits thy scorn."

In an original copy before me, evidently used by one of the Society, this last line permitting scorn is cancelled by a pen, and there is written under it in French: "Show a good heart even to thy enemies."

The third canticle invokes the "God Creator, Soul of Nature," and a verse says:

"While blaming error, let us plead with the offender:
Heaven alone has the right to punish him;
With the sweetness that mingles love with instruction
Forgive, without malice:
The art of being happy is to love thy kind:
Ah, what duty is more sweet to fulfil!"

In other hymns are such expressions as "Father of the Universe, Supreme Intelligence!"—"Embrace us with thy love," etc.

From the Manual I translate two extracts:

"Our opinions depend on so many circumstances of which we are not the masters, that the Theophilanthropists are persuaded that God, just and good, will not judge us after our opinions, nor after our different forms of worship, but from the sincerity of our hearts and from our actions."

"What God is, what is the soul, how he rewards the good and punishes the evil, Theophilanthropists attempt not rashly to penetrate into. They feel that there is too great a distance between God and the creature that it should try to comprehend him. They are content with the knowledge, from the magnificence and order of the universe, from the testimony of every people, and of their own conscience, that there exists a God; that they cannot conceive a deity without the idea of every perfection; that, consequently God is good, is just, and therefore virtue will be rewarded and vice punished."

The private houses having become too small for the numbers interested, it was resolved that Theophilanthropy should appear as a public movement, and so it happened that on January 16, 1797, this name, combining God, Love, Man, appeared on the door of St. Catharine's chapel. As a gesture in the same direction the "Philadelphians," who founded in London what is now the South Place Society (February 14, 1793), might claim precedence, but these, though bolder in negation, were not of equally wide views. While Elhanan Winchester, who founded the London "Philadelphians," was publishing his reply to the *Age of Reason*, the Theophilanthropists were welcoming the author of this temple-shaking book as an inaugurator, though they probably pruned his address of some aggressiveness. The Philadelphian "love of the brethren" was not up to the "love of man," and Theophilanthropy merits homage as the first church in Christendom to place man by the side of God,—man as man, without regard to race or creed.

As an indication of the catholicity of this movement it may be mentioned that its meetings were fixed at an hour which would not bring them in conflict with the hours of other religious assemblies.

The ancient crucifix and other symbols of St. Catharine's altar had been cleared away by the Revolution, but the altar remained, —an altar naked and desolate, the primal foundation of all temples, laid deep in the sacred longing to sacrifice something, now awaiting the next offerings. These came in the form of flowers. Every one who entered laid thereon a flower, or a bunch of flowers: these were the only sacrament. In the *Agni Purana* it is written: "The Lord of Life [Vishnu] should not be worshipped with flowers that have faded: those that grow in thine own garden are best: with the flowers must be reverence, itself a flower." This I remembered when seeing the Buddhists in Ceylon carrying flowers to their temples, and from the same garden—the human heart—came the flowers which the Theophilanthropists, also the blind and the outcast, laid on the ancient altar of St. Catharine, denuded of crucifix, Madonna, and host. And with the flowers came more spiritual roses, lessons read from Jesus, Buddha, Zoroaster, Confucius, Epictetus, Aurelius, the Psalms. The lecturer for the day wore a pure white robe while speaking. There was never any regular Minister. There was a simple form of marriage, and the birth of a child was celebrated, though without any kind of christening. In their Manual were warnings against ceremonies, and the temple must have no ornament representing the deity, nor any of his attributes, nor any

figure representing a virtue or any person. There must be no particular holiday, but celebrations harmonious with the seasons.

Above the flower-laden altar the decalogue was replaced by five inscriptions:

"1. We believe in the existence of God, and in the immortality of the soul.

"2. Worship God, cherish your kind, render yourselves useful to the country.

"3. God is everything which tends to the preservation or the perfection of Man; Evil is everything which tends to destroy or deteriorate Man.

"4. Children, honor your fathers and mothers; obey them with affection, comfort their old age. Fathers and mothers, instruct your children.

"5. Wives, regard in your husbands the chiefs of your houses. Husbands, love your wives; and both render yourselves reciprocally happy."

The Theophilanthropists were especially careful not to censure the beliefs of others; every lecture had to undergo the revision of a committee to see that it contained no such criticism. In his opening address Paine said, "The views of this society extend to public good as well as to that of the individual, and .... its principles can have no enemies." So indeed it seemed. The expansion of the society in its first public year exceeded anything known in religious history. Several statesman who had been apprehensive that Catholicism would reoccupy the vacancy left by its overthrow favored the new movement. The first Minister of France, Larevellière-Lepeaux, in an address on Public Instruction, extolled Theophilanthropy, though he never ventured to its meetings, and this raised the movement to national importance. Twelve parish churches were allotted to Theophilanthropy in Paris, and it spread through the provinces. It is wonderful to recall that this new religion, of which Paine was one founder, for years held possession of Notre Dame cathedral itself!

The Theophilanthropists tried to bring flowers in their season. But what was to symbolise the divine love and loveliness when winter came? During all their summer of success a priestly winter was waiting and watching to wither all their flowers of hope and humanity. Their very success proved a fatal success. A sullen priesthood was not to be conciliated by permission to conduct their tolerated functions in a country where for ages they had reigned, with right to suppress all rivals. Their authority had deep roots in popular superstition, and indeed in something deeper: the plainness of Theophilanthropist worship could not compete with beautiful images, pictures, shrines, nor nature's smile in flowers make up for the lost smile of the Heavenly Mother.

Priesthood could not yet come out in the open, but it worked in secret,—circulating leaflets accusing the Theophilanthropists of

secret orgies, of political intrigues, and an intention to make Larevellière-Lepeaux Pontiff! When Bonaparte arose, the cynical Bishop Talleyrand was made his chief Minister. Larevellière-Lepeaux tried to interest Talleyrand in Theophilanthropy, but the Minister answered, "All you have to do is to get yourself crucified and buried, and rise the third day." The creeds had long become to Talleyrand a joke, but none knew better than he the tremendous machinery at hand in the Church.

Bonaparte easily took his hints. The wily Corsican said to Dupuis, "As for myself, I do not believe that any such man as Jesus Christ ever existed, but the people are inclined to superstition, and I do not think it right to oppose them." This involved the restoration of the Church, and it could not coexist with Theophilanthropy. In the first year of this century Theophilanthropy was crushed under that spurred heel which presently tried to crush Europe. Theophilanthropy has the honor of being the only religion which the nineteenth-century war-god found it necessary to suppress. I heard Victor Hugo say that Bonaparte fell because "he troubled God"; but the God of Theophilanthropy had troubled Bonaparte with peaceful ideals before he retaliated.

The history of Theophilanthropy has never been written. The account given of its rise by Paine ("Letter to Erskine") is the best, but most of this history I have had to pick out of old French pamphlets, journals, and manuscripts.

I have not dwelt on the limitations of Theophilanthropy, the chief one being its failure to grapple with any of the great problems besetting the human mind. To Catholic definiteness it opposed indefiniteness. On this account Paine who believed clear negations essential became somewhat alienated from it, and he with Elihu Palmer inaugurated a similar but more vigorous movement in New York which but for the death of both might have come to something. After Paine's death some of his last religious writings were published in a New York magazine called *The Theophilanthropist*. Eighty years ago there seems to have been a "Society of Theophilanthropists" in Glasgow, with a good hymn-book and a doxology which strikes an ethical note:

"The man whom virtue does not bind
No lasting pleasure knows;
Nor e'er enjoys that peace of mind
Which innocence bestows."

LAMARCK, AND NEO-LAMARCKIANISM.

BY PROF. A. S. PACKARD.

WHO WAS LAMARCK, and what work did he accomplish? Was he merely a compiler like Buffon or the author of the *Vestiges of Creation*? If we look for an answer in Darwin's immortal work *The Origin of Species*, we shall find that for once this otherwise invariably candid writer, so prone to give the fullest credit for aid to his contemporaries, in referring to his great French predecessor, whose eminence as a philosopher he did not at all appreciate, sets aside his theories and speaks of "the views and erroneous grounds of opinion of Lamarck" as having been largely anticipated by his grandfather Erasmus Darwin. It is questionable whether Darwin ever carefully read through Lamarck's *Zoologie Philosophique*, or the other writings of the French zoölogist. We have heard a young but distinguished English zoölogist call Lamarck's "a bad book," probably meaning that it was not sound from the Neo-Darwinian point of view. Ray Lankester writes of Lamarck in *Nature*, as if the doctrine of the inheritance of acquired habits were the sole, or at least the most characteristic, contribution Lamarck had made to the theory of descent. It is evident that these English writers have not carefully read all that Lamarck has written, while they do not give him that credit for the clearness and fulness of his views, which Haeckel and others in Germany have done. It should be here said that Lamarck's lucubrations on chemical and physical as well as physiological subjects are worthless, and his lack of caution in publishing them is deplorable. At the same time it should be said that, when a young man, in studying the clouds he was led to believe that weather forecasts could be made, and in geology he anticipated the uniformitarian views of Hutton and of Lyell.

After thirty years experience as a systematic botanist, his *Flore*

Française being the standard French work for many years, Lamarck at an age when many other men of science cease to be productive, was transferred to the new chair of invertebrate zoölogy in the *Jardin des Plantes*. The industry, toil, and productive thought of another period of thirty years, resulted in his placing the zoölogy of the lower animals in a clearer and better defined light than ever before. This zoölogical expert wrought most important changes and reforms. He separated the Crustacea from the insects. He established the class of Arachnida, separated the Annelida from other worms, and showed the distinctness of Echinoderms from polyps, thus anticipating Leuckart, who established the groups of Cœlenterata or polyps nearly half a century later. He founded the class of Infusoria. When a boy we used to arrange our shells by the Lamarckian system, which was universally used in the second quarter of the century, and great reforms in the classification of the Molluscs were wrought by him. He was called the French Linnæus, but his work was greatly in advance over that of Linnæus, being that of a skilful, profound systematist, who based his system on the facts of anatomy and structure.

As a zoölogical philosopher no one of his time approaches Lamarck, and indeed he lived fifty years ahead of his age, as the times were not ripe for the hearty and general adoption of the theory of descent. As in the animal world we have here and there prophetic types, anticipating in their generalised, synthetic nature the incoming, ages after, of more specialised types, so Lamarck anticipated by more than a half century the principles underlying the present evolutionary views, although owing to the sneers and criticisms of Cuvier and others his views were neglected and almost forgotten for a generation.

Let us compare the factors of Lamarck and of some of his contemporaries with those of Darwinism as such. The factors of Buffon who lived from 1707 to 1788 were three: climate, food, and domestication, and he insisted that there was a balance in nature. The factors of Erasmus Darwin (1731–1802), in his poem entitled "Zoonomia," were the reactions of the organism to the action of external surroundings, while use and effect were vaguely insisted on. He suggested that all the forms of life originated from a single filament, but as he had little practical skill as a systematist he did not suggest or construct a phylum.

Let us now compare first the general principles insisted upon by Lamarck, and then enumerate the Lamarckian factors. He insisted on the great length of time during which life-forms had ex-

isted, the gradual, uniform action of physical and biological forces, and the absence of catastrophies, thus anticipating the uniformitarian views in geology of Hutton and Lyell. He claimed that the lower forms arose by spontaneous generation, and are being so produced at the present day. He believed in progressive development, also insisting that many forms, whole orders and classes, were the result of retrogressive development and degeneration. He explained rudimentary structures as remains of parts which had been actively used by the ancestors, but which have become atrophied by disuse. He very clearly states that development goes on from the simple to the complex, and that the animal kingdom is like a tree, with wide gaps between the branches. He fully appreciated the fact of variation, as what botanist or zoölogist does not,—and Lamarck worked over fifty years handling and examining the lower organisms. He intimated, for instance, that specific characters vary most, and that the peripheral parts, as the legs, mouth-parts, antennæ, etc., are first affected by the causes which produce variations, while he distinctly states that it required a longer time for variation to take place in the internal organs. He also recognises the great fact of adaptation to needs. Lamarck has given us the best definition of species we have been able to find. Unlike Buffon, he is never self-contradictory or ironical, and maintained his views without modifying them till the end of his life.

Lamarck's factors of organic evolution were seven, as follows:

1. Change of environment, both direct and indirect in its action on the organism; these include change of habitat, of climate, soil, food, temperature.

2. Needs, new desires, appetites, not so much mere mental desires as the necessities of the entire organism, physical and mental, due to changes in the surroundings. Lamarck's use of the word need or necessity (*besoin*) has been greatly misunderstood and caricatured. By such changes animals are subjected to new needs. Lamarck gives as an instance the birds driven by necessity (*besoin*) to obtain their food in the water, who gradually assumed characters adapting them for swimming, wading, or for searching for food in the shallow water, as in the case of the long-necked kinds. Snakes lost their limbs in becoming adapted for gliding through brush or grass or such places. His best examples are the giraffe, kangaroo, and the ai, the lemur of Madagascar, so wonderfully adapted for an arboreal life. The acquisition of new habits or usages through necessity (*besoin*), owing to a change in surroundings, is much dwelt upon. He claims: "*Il est facile de démontrer par l'observation que*

ce sont usages qui ont donné lieu aux formes," which is another expression for Geoffroy St. Hilaire's "*C'est la function qui crèe l'organe.*"

By many, including Wallace, Lamarck's views under this head are not fairly stated. It is evident to any one who will carefully read what he says of "*besoins*" that he does not refer so much to mental desires as to those needs thrust upon the animal by change of circumstances. Wallace in his classical essay which appeared in 1858 inaccurately states Lamarck's views when he represents Lamarck as saying that the giraffe acquired its long neck by desiring to reach the foliage of the more lofty shrubs, and constantly stretching its neck for the purpose. What Lamarck does say is that "the giraffe lives in dry, desert places, without herbage, so that it is obliged to browse on the leaves of trees, and is continually forced to reach up to them. It results from this habit, continued for a long time in all the individuals of its species, that its fore limbs have become longer than its hind ones and that its neck has become so elongated that the giraffe, without raising itself erect on its hind legs, raises its head and reaches six metres high (almost twenty feet). We submit that this mode of evolution of the giraffe is quite as reasonable as the one insisted upon by Mr. Wallace. Quatrefages has also protested against the way Lamarck's views have been caricatured, although he was not himself an evolutionist.

3. Use and disuse. While the continual use or exercise of organs develops them, as in the case of birds, giraffes, and kangaroos, the second of these principles was illustrated by the case of the mole, the spalax, the whale-bone whales, whose rudimentary teeth exist in the embryo, the ant-lion, the blind Proteus of caves, the eyeless bivalves, and the snakes, whose limbs he claimed have disappeared from disuse.

4. Lamarck frequently refers to the precautions that nature has taken to place limits to the too great increase in individuals, and consequent overcrowding of the earth. The stronger and better armed, he says, devour the weak, the large animals devour the smaller. The multiplication of the smaller species is so rapid that these smaller species render the earth inhabitable for others, but their length of life is very short, and nature always preserves them in just proportions not only for their own preservation, but also for that of other species. The larger species, however, multiply slowly, and thus is preserved the kind of equilibrium which should exist. These views are of the same general scope as Darwin's law of struggle for existence, and imply Spencer's principle of the survi-

val of the fittest. Lamarck does not, however, bring out clearly the fact of competition, a cardinal doctrine of Darwinism.

5. Lamarck's characteristic doctrine is the inheritance of characters, including those acquired during the lifetime of the individual. But this was also held by Darwin and all evolutionists until called in question by Weismann. The doctrine of heredity itself he recognised as a fundamental principle in biology.

6. The effects of crossing were considered by Lamarck, and, what has been overlooked by commentators, he clearly insists on the swamping effects of crossing, saying: "If, when any peculiarities of form or any defects whatsoever are acquired, the individuals in this case always pairing, they will reproduce the same peculiarities, and if for successive generations confined to such unions, a special and distinct race will then be found. But perpetual crosses between individuals which have not the same peculiarities of form, result in the disappearance of all the peculiarities acquired by particular circumstances." Here we have anticipated a great deal of what we find in the writings of Darwin, Romanes, and others.

7. Another principle, much insisted on by evolutionists, and especially by Wagner in 1868, is the principle of geographical isolation. It is this which underlies Gulick's principle of segregation, and Romanes's similar doctrine of physiological selection. This was anticipated by Lamarck, who at the close of the paragraph we have just quoted, and which has been overlooked by commentators, goes on to say: "Were not men separated by distances of habitation, the mixtures resulting from crossing would obliterate the general characters which distinguish different nations." (*Phil. Zool.*, p. 262.) He does not, however, specifically apply this principle to other animals than man, but the principle stated by Darwin and other writers is the same.

If we now turn to Darwin's *Origin of Species* it will be seen that the fundamental doctrine of his work is Natural Selection, based on the principle of competition. His book, however, written as it was in the fifties, and packed with facts drawn from embryology, morphology, and paleontology, those sciences having been founded and developed after Lamarck's time, accomplished the gigantic labor of convincing and converting the scientific world. Darwinism is popularly synonymous with evolution. It is, however, obvious that without the action of the Lamarckian factors, we should have had no assemblages of plants and animals to afford a field for the play of competition and natural selection. It

should be borne in mind that Darwin starts with the tendency to variation, which he assumes. It is obvious that the Lamarckian factors as a whole started the ball in motion and laid the solid foundations on which natural selection rests. Meanwhile the competitive and selective principles have been operating throughout the entire period since organisms came into existence in any number or variety. It is therefore well to insist that in discussing the origin of the doctrine of evolution, due and full credit should be given to the great French naturalist and philosopher, who a half century in advance of his time very clearly and explicitly formulated the primary laws of organic evolution.

It should also be explicitly understood that natural selection is not an active factor, or a *vera causa*. It simply expresses the results of the operation of a series of factors, those factors having been previously worked out, or at least suggested and supported by a few examples, by Lamarck.

Now to this Lamarckism, as we have represented it in its modern form, supported and broadened by the facts of modern morphology, embryology, physiology, the study of geographical distribution and the facts of variation, and more especially by the wonderful genetic series revealed by the labors of paleontologists—all of which were unknown to Lamarck—to this modern phase of Lamarckism, we have given the name of Neo-Lamarckism, since it stands for Lamarckism plus the additions to our knowledge made since the date of Lamarck's works.

One of the most important treatises on these Neo-Lamarckian lines is the recent work of Prof. E. D. Cope, *The Primary Factors of Organic Evolution*.[1] In a logical way, abundant facts supporting the principles advanced, this prominent naturalist treats first of the nature of variation; second, of the causes of variation, and, in the third part, of the inheritance of variation. The whole argument and the mode of stating and illustrating it is clear, compact, and strong. It forms an admirable digest of some of the phases of the subject of organic evolution. One feature of it is the conciseness of style, being free from the verbiage which weakens much of Romanes's writings. So far as we have observed the facts are reliable, and are to be accepted as true. The force, clearness, and compactness of the style are the result of years of anatomical and systematic work plus a good deal of hard, logical thinking. It is safe to say the book and its views will never be superannuated or placed on the retired list. It may be hard reading for the layman,

[1] Chicago: The Open Court Publishing Co. 1896. 12 mo, pp. 547, cuts, 120. Price, $2.00 net.

but the working evolutionist, the student of variations and of their causes, will find it most suggestive and indispensable.

It is written, however, from the point of view of the author's own lines of study, which have been in vertebrate paleontology. So many-sided is the theory of descent that no single book presents all sides in equal proportions. Many books on evolution are written entirely from the side of Darwinism or natural selection as such; others, like Semper's *Animal Life* and Eimer's *Organic Evolution*, as well as the works of St. George Mivart, Haeckel, Perrier, and others, are cast in a broader mould and are more eclectic.

It is evident that the most productive line of investigation in the future is a study of variation and its causes, particularly the latter. Darwinians insist that variations have been indefinite, accidental. Most Neo-Lamarckians hold on the other hand that they are not fortuitous but definite, along certain lines, the proof being that evolution has proceeded along certain definite lines, ending in this or that order or class. The problem now is to ascertain the physical causes of variation, and why, for example, evolution has followed this or that definite path, tending on the whole upwards, and ending in the eight branches of the tree of animal life, with their lesser branches and twigs, the classes, orders, families, genera, and species. These lines, as regards the vertebrates, are very clearly defined by our author. The recent carefully detailed work of Bateson, *Materials for the Study of Variations*, not only makes no attempt to discover the causes, but is simply a collection of cases of abnormal sports and variations, the author actually stating that it is "hard to see how the environmental differences can thus be in any sense the directing cause of specific differences." On the contrary we hold, with Herbert Spencer: "The direct action of the medium was the primordial factor of organic evolution." And it is vastly more broadening and informing instead of merely collecting and cataloguing sports and variations at least also to attempt to examine into the changes in temperature, climate, soil, and in the biological environment, which have in many cases clearly enough produced the variations—whether useful or not to the animal. Regarding the last subject, a great deal of tedious verbiage and wearisome discussion has been going on in the English journals, with no definite results.

Concerning the causes of variation much might have been said by our author as to the effect of changes in temperature, light, food

climate, but space hardly permitted, and Semper's work, to which he refers the reader, has adequately covered the ground.

Considerable space is given to the subject of parallelism. This section is interesting, since it restates in a detailed way the fact worked out by Von Baer, Agassiz, and Vogt, and brought by Profs. Hyatt and Cope into relation with the doctrine of evolution. Parallelism, however, appears to express a result and is not an active factor in evolution. Yet the general parallelism existing between taxonomy, ontogeny, and phylogeny is of great interest, and in this chapter the author shows admirable power of generalisation.

The causes of variations Cope divides into two classes: the physico-chemical (molecular), and the mechanical (molar). To these two types he gives the names Physiogenesis and Kinetogenesis. In this section also is discussed the principle of inheritance of characters. The portion on physiogenesis is short with but few cases mentioned compared with the many which might be brought forward, for which, however, he refers the readers to Semper's *Animal Life.*

To dynamic evolution or kinetogenesis the author devotes nearly a third of the book. And here Dr. Cope, who has given much time and thought to the subject, is at his best. Kinetogenesis is but a newly-coined word for a study of the effects of use and disuse of the different organs of the individual. A great deal has been said about structures or peculiarities in the organisation which are useless to their possessors. These parts are classified by Cope, who, with others, regards them as brought about by disuse. Such are the vestigial legs and digits of numerous lizards, the mammæ of male animals, and the vestigial structures found in many highly specialised animals, notably in man where some seventy such vestiges exist to prove his descent from the lower Primates. The existence of some of these has been explained by Darwin by the action of natural selection, through "his unwillingness to look to disuse as the cause of the conditions he describes." The instances Dr. Cope quotes in illustration of kinetogenesis are taken from American authors, and indeed in the labors of the late Prof. Ryder, Cope, Dall, Hyatt, Jackson, Osborne, and others in this country, and of Hûtter, Henke, Reyher, Fick, Tornier, and others in Europe, including Herbert Spencer, who really was the first to start this kind of inquiry, we have the first attempts to explain by the effects of impacts, strains and stresses, and other movements of the muscles and other soft parts on the hard parts (as shells, the ar-

thropod crust, and the teeth and bones), the origin of joints, segmental parts, and differences in form of the parts of the skeleton. There has thus been opened up a distinct department of dynamic evolution, the study of which promises the most fruitful results. Cope's discussion of this whole matter is ingenious; his arguments appear to us to be solid and logical, and the objections of the Neo-Darwinians have been amply met.

The treatment of the principle of natural selection is fair. Its inadequacy as a primary factor or as the efficient cause of all variations, so clearly proved by Herbert Spencer and others, is here fully insisted upon.

Under this head also we have a brief, terse discussion of isolation, though it was first suggested by Lamarck, as we have already seen, and is by no means a part of the theory of natural selection, and might well have been allowed more space, since it is, though a passive agent or principle, one of universal occurrence, and of no little importance in the preservation of variations and their final elaboration into specific characters.

We have never regarded protective mimicry as a genuine active factor in the production of specific characters, and with the extreme views of Wallace, Poulton, and others we have been unable to agree, and we coincide with Cope, that to ascribe such color and form-characters to natural selection as a cause, is clearly impossible. The cases of mimicry are often due to the direct or indirect action of light, and other factors, and the supposed agency of natural selection in the matter is a fallacy. Many examples are cases of convergence. Into some cases the selective principle appears to enter, but the last word, it seems to us, has not yet been spoken on this intricate subject.

No one interested in the subject of heredity—and who is not?—can well afford to pass by the third part of this book in which the inheritance of variations is discussed in a fair and comprehensive way. Because perhaps from quite independent points of view the reviewer's opinions are in harmony with those of Cope, he is led to endorse, with little fault-finding, all that is here said in favor of the principle of the inheritance of characters acquired during the life-time of the individual, and against the extremely hypothetical views of Weismann. The very strong and apparently well-proved cases, quoted from Brewer, of the inheritance of characters due to nutrition, to use, as in the example of the evolution of the trotting horse, and particularly the inheritance of characters due to mutilation and injuries and those due to regional influences appear to be

strong proof that in these days such inheritances may at times occur, though in earlier geological times they must have been more frequent and normal. With little doubt in the near future this discussion, which, as Cope states, is "sometimes a logomachy dependent on the significance which one attaches to the term "acquired characters," will gradually close, by the abandonment by both parties in the controversy of extreme views on the subject.

The discussion under the head of "The Energy of Evolution" is suggestive, though there is a tendency to the multiplication of newly coined terms which may seem, for the sake of clearness, to be necessary, but which will repel the lay reader. Again, returning to the consideration of the dynamics of organic evolution, and to prove the inadequacy of the claims of natural selection, the author, probably quite unconsciously, follows in a general way the Lamarckian argument. Natural selection, Cope well maintains, "cannot be the cause of those alternatives from which it selects. The alternatives must be presented before the selection can commence." Darwinians imagine that here and there a useful variation or sport has been preserved or eliminated, and has been, so to speak, nursed and petted and cared for until it became a varietal and ultimately a specific character. But, as suggested by the *critique* in the *North British Review* for 1867 (attributed to Fleeming Jenkin), the objector to natural selection requires that useful variations should, in order to be preserved, arise in an enormous number of individuals "all having a little improvement in the same direction." And this is distinctly what Lamarck has said. In his case of the birds evolved by necessity into swimming or into wading forms, he does not intimate, as generally supposed by those who carelessly read him, that a single bird, by simply wishing or willing, gradually acquired webbed feet, or longer necks or longer legs, but he says, speaking of a supposed bird wishing to prevent its body from sinking in the water, "it makes every effort to extend and elongate its feet." "*Il en résulte que la longue habitude que cet oiseau et tous ceux de sa race contractent d'étendre et d'allonger continuellement leurs pieds*," etc.; and in the next case of the bird wishing to fish without wetting its body and which "makes continual efforts to lengthen its neck, the necessity of adopting this new habit or means of obtaining its food, is not restricted to a single individual, but to all those of its race." In other words, we have here suggested that the variations were common to the species *en masse* and were induced by a change in the physical or biological environment which drove all or large numbers of the indi-

viduals of a species to the necessity of adopting new habits, and thus to transform from one species into another. It is the great weakness and inadequateness of Darwinism as such that individual or chance variation or sports, which the whole course of nature tends to wipe out by crossing or by the death of the unfit individual, are suffered to be the ancestors of species. This, it is true, may sometimes happen, but it is an exception which proves the rule.

Dr. Cope then enters into a discussion of the energy of growth and evolution as distinguished from that displayed by non-living bodies. The former he calls Anagenesis and the latter Catagenesis. His anagenetic class "tends to upward progress in the organic sense; that is, towards the increasing control of its environment by the organism, and towards the progressive development of consciousness and mind." He well criticises Herbert Spencer's definition of evolution as a process of "integration of matter and dissipation of motions," claiming, correctly, we think, and with much originality, that such a definition only applies to inorganic bodies, that in orga.ic progressive anagenesis there is absorption of energy. "In the anagenetic energies, on the other hand, we have a process of building machines, which not only resist the action of catagenesis, but which press the catagenetic energies into their service. In the assimilation of inorganic substances they elevate them into higher, that is, more complex compounds, and raise the types of energy to their own level. In the development of molar movements they enable their organisms to escape many of the destructive effects of catagenetic energy by enabling them to change their environment, and this is especially true in so far as sensation or consciousness is present to them."

All this prepares the way for the reception of the view expressed in the final chapter, entitled "The Functions of Consciousness." Here the author steps on less certain, because metaphysical, ground, whither many will not care to follow him, and although Lamarck has attributed the movements of animals to their needs, which we interpret to mean bodily necessities as much as mental volitions, Professor Cope goes farther than the French philosopher, and attributes consciousness to all animals. "Whatever be its nature," he says, "the preliminary to any animal movement which is not automatic is an effort;" hence he regards effort as the immediate source of all movement; that the control of muscular movements by consciousness is distinctly observable; that reflex acts are the product of conscious acts. He concludes, then,

that "consciousness has been essential to a rising scale of organic evolution. In the long run the most intelligent have survived; hence he postulates a primitive consciousness which he has called Archæsthetism, which "maintains that consciousness as well as life preceded organism, and has been the *primum mobile* in the creation of organic structure."

Finally, in approaching an explanation of the phenomenon of anagenesis, our author asks: "Why should evolution be progressive in the face of universal catagenesis? No other ground seems discoverable but the presence of sensation or consciousness, which is, metaphysically speaking, the protoplasm of mind. The two sensations of hunger and sex have furnished the stimuli to internal and external activity, and memory, or experience with natural selection, have been the guides. Mind and body have thus developed contemporaneously and have reacted mutually. Without the co-operation of all these factors, anagenesis seems impossible."

This is certainly very suggestive, and will commend itself to those who, taking for granted the Darwinian view that all variation is fortuitous and indefinite, and all evolution purely material and mechanical, reject it because they suppose that evolution is purely materialistic and excludes mind from creation; whereas it is not at all improbable nor unthinkable, even, from a scientific standpoint such as that taken by our author, that mind and consciousness are immanent in each operation of the laws underlying the evolution, not only of life on our globe, but also of the earth itself and of the universe of which it forms a part.

IS THERE MORE THAN ONE BUDDHISM?

IN REPLY TO THE REV. DR. ELLINWOOD.

BY H. DHARMAPÁLA, ANAGÁRIKA.

I HAVE READ with interest the controversy between the Rt. Rev. Shaku Soyen, Dr. Barrows, and Dr. F. F. Ellinwood in *The Open Court* of January. It is evident that Dr. Ellinwood is a student of Buddhist translated literature, judging by the quotations he has freely made in defence of the position adopted by Dr. Barrows with reference to the theory that Nirvâna is annihilation.

Dr. Ellinwood speaks of Buddhism as "a system which is one thing in Ceylon, quite another in Tibet, and still another in China and Japan." Just so, Christianity is one thing in Russia, quite another in Rome, and still another in Germany, England and America, where the Presbyterian and Universalist live side by side.

I grant that Buddhism has undergone phases of transformation. Many changes in the outward superstructure have been made according to the conditions of the countries where the Good Law was preached, yet amidst all these vicissitudes the doctrines of Buddha remained unchanged.

Here lies the wonderful vitality of the doctrine that he preached twenty-four centuries ago. Nepal is the only country where a Hinduised form of Buddhism exists, which, however, from the earliest times has been regarded as heterodox and heretical. But the Buddhism of Tibet, China, Japan, and of the countries of the Indo-Chinese Peninsula preaches fundamentally the same doctrine. By Indian Buddhist Bhikshus, says Samuel Beal, "a new literature was produced—a literature essentially Indian—and therefore Aryan. . . . The Buddhists of India brought about all this, and much more than this, for what occurred in China happened also throughout the regions beyond, and in due course Corea, Japan on

that side, and Mongolia and Tibet on the other, were converted and made obedient to *the same faith.*"[1]

What, then, is Buddhism? What is it that all Buddhists, if they are genuine Buddhists, hold in common?

Every Buddhist knows the four noble truths; every Buddhist knows that they have been proclaimed by the Tathâgata, and they are the foundation of his religion.

The first noble truth states that there is misery, implying the need of a religion of salvation. The second noble truth states that we must blame ourselves for our own misery, not any other man nor any demon or god: the cause of misery is desire, lust, ignorance, and hatred. The third noble truth points out that the removal of the cause of misery will lead to the removal of misery itself; and finally the fourth noble truth, pointing out the way of purity, is the logical outcome and practical application of the other three noble truths. This fourth noble truth is the essence of all Buddhism. It proclaims that not by asceticism, not by methods of the Brahmanical yoga (hypnotical trances), not by looking out for our happiness, but solely by walking on the noble eighth-fold path of righteousness can Nirvâna be obtained.

There is no genuine Buddhist who does not accept the four noble truths, and every one who does accept them is a Buddhist, whatever else he may be in addition, a philosopher, a scholar, a Christian, a Mohammedan, a Theosophist, a believer in superstitions, or what not, and any one who walks on the noble path of righteousness, leading a pure life, will in time rid himself of his impurities and errors as a silversmith, little by little, blows off the dross from the silver. (See Dhammapada, verse 239.)

Buddhism, or the Dharma, is thus defined in the *Chullavagga* (x, 5): "Of whatsoever doctrines thou shalt be conscious, Gotami, that they conduce to passion and not to peace, to pride and not to veneration, to wishing for much and not to wishing for little, to love of society and not to seclusion, to sloth and not to the exercise of zeal, to being hard to satisfy and not to content, verily mayest thou then, Gotami, bear in mind that that is not Dhamma, that that is not Vinaya, that that is not the teaching of the Master. But of whatsoever doctrines thou shalt be conscious, Gotami, that they conduce to peace and not to passion, to veneration and not to pride, to wishing for little and not to wishing for much, to seclusion and not to love of society, to the exercise of zeal and not to sloth, to content and not to querulousness, verily mayest thou then

[1] Beal's *Buddhist Literature in China*.

bear in mind that that is the Dhamma, and that is Vinaya, and that the teaching of the Master." (Translation by Rhys Davids.)

Another definition of Buddhism as formulated by the great Arhat Moggaliputta Tissa, chief of the third great Asoka convocation, runs thus: "It is a Dhamma which follows all Dhammas, and yet all Dhammas descend into or follow that Dhamma."

From the earliest times of the history of Buddhism it has never been correctly understood by hostile critics. The Brahmans called it *Nástika*, the nihilistic, because Buddhism rejects their speculations concerning the âtma and ignores the authority of the Vedas; the Jains called Buddha *Máyávadi*, the holder of the doctrine of non-reality.

Buddhism is not a creed, for it discards all belief that must be taken for granted. It is called the *Vibhajja vdda*—the religion of observation and analysis. Truth is the touchstone of Buddha's religion. All dogmatic theorising is abandoned as a "jungle, a wilderness, a puppet show, a writhing, and a fetter," and is "coupled with misery, ruin, despair, and agony, and does not tend to aversion, absence of passion, cessation, quiescence, knowledge, supreme wisdom, and Nirvâna."

The worldly-minded, in their passions, are not in a condition to realise Nirvâna. Only the perfectly unselfish, those freed from all error and dogmatism, can attain the sinless state. None else, neither god nor man, can know the condition of the emancipated Holy Ones who have reached Nirvâna. Descriptions and explanations are of no avail; it is a state to be experienced. But one thing is sure, Nirvâna is the highest bliss attainable, and we Buddhists are confident that there is no better way to Nirvâna than the noble eightfold path taught by our Master, the Buddha.

THE TRINITY IDEA.

BY THE EDITOR.

THE SIGNIFICANCE of the trinity relation is strongly marked in the symbolism of religious doctrines, in philosophy, and in the various phenomena of nature. Three members are the necessary constituents of a syllogism. Every spot in space is naturally determined from any point of reference by three coördinates, implying that the possibility of moving in infinite directions is for measuring purposes reducible to three dimensions, and history teaches us that the progress of civilisation is effected by a reconciliation of contrasts, which appears (as Hegel puts it) in a series of (1) a thesis, (2) an antithesis, and (3) their combination.[1]

In addition to the important part which the trinity idea plays in abstract reasoning, we find that it is an indispensable conception in nature. When trying to comprehend the constant flux of phenomena as manifestations of immutable laws, we distinguish (1) the eternal norms of being, viz., the laws of nature, the *Urgrund*, the βυθός, the creative and formative power, the conditions of existence, religiously called "the Father of all life;" (2) the actualisation of existence in concrete things and living creatures, the phenomena in which the laws of nature are manifested, the avatars or incarnations of the creator, the evolution of life, the reality of the world-process, which is consummated in the sinless man, the perfectly Enlightened One, the God-man; and (3) the end and aim of life, the ideal, the aspiration of reaching a goal that animates life and gives purpose to its endeavors. These three aspects of life (1) the What, (2) the Whence, (3) the Whither; (1) *Grund*, (2) *Ursache*, (3) *Zweck*; the (1) ground or *raison d'être*, (2) the constant flux of causation, and (3) the direction or tendency of existence, are three phases of one and the same reality; they are a

[1] For particulars see *Primer of Philosophy*, pp. 100-102.

trinity which renders three aspects possible: (1) the nomological, (2) the ætiological, and (3) the ethological (i. e., the teleological or ethical).

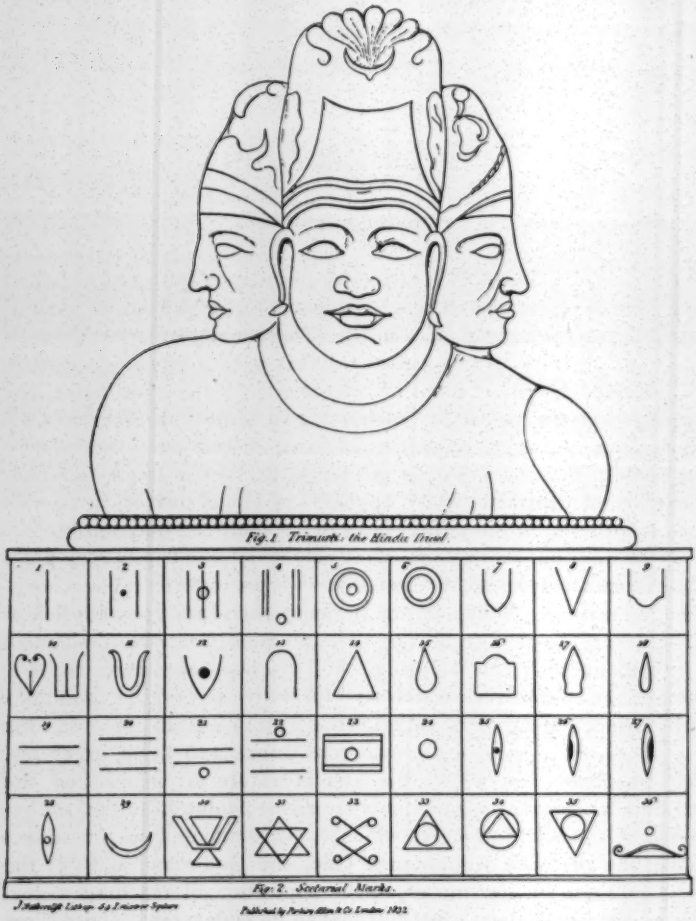

Fig. 1. The Brahman Trimurti. (After Coleman.)

The trinity conception of God is offensive only to those who conceive God after the fashion of a human individual, but it commends itself to the philosopher who understands that God is not

personal, but supersonal, not a concrete individual will, but an omnipresent effectiveness, not *a* God, but God.

It is certainly a remarkable coincidence that several among the higher religions teach the trinity idea in one or another form. Only the Jews and Mohammedans are strict Unitarians, the Parsee faith is almost dualistic, and the religion of ancient Egypt, at least in one of its phases, exhibits the peculiar doctrine of a quadrinity. But the ancient Babylonians, the Brahmans, the Buddhists, and the old paganism of the Germanic races, as explained in the two Eddas, teach a trinity of their God.

The Edda speaks of Alfadhur as Har, the High One, Ifn-Har, the equally High One, and Thridhi or the Third One. But this trinity doctrine is not so clear as the trinity doctrines of the East, nor are we quite sure that it is not a later product which might have originated under Christian influence.

The old Babylonians worshipped the trinity of Anu, Ea, and Bel; Ea being quite analogous to the Christian God the Father, and Bel (also called Merodach) to Christ, God the Son, for he is the saviour, and the conqueror of Tiamat, the Evil One. Says Mr. Budge in his excellent booklet, *Babylonian Life and History*, p. 127:

> "The omnipresent and omnipotent Marduk (Merodach) was the god 'who went before Ea' and was the healer and mediator for mankind. He revealed to mankind the knowledge of Ea; in all incantations he is invoked as the god 'mighty to save' against evil and ill."

Brahm, the highest God of Brahmanism, representing the All, or the abstract idea of being, is conceived as a trinity, which is called Trimûrti (Fig. 1), consisting of Brahma, Vishnu, and Shiva, three divine presences who in many respects bear quite a close resemblance to the Christian Trinity. The most famous ancient representation of the Trimûrti is found near Bombay in the caves of Elephanta, where three massive faces growing from one body are sculptured in the rock.

Kâlidâsa, the Shakespeare of ancient India, best known in the West as the author of Sakuntala, says:

> "In these three persons the one god was shown,—
> Each first in place, each last,—not one alone;
> Of Shiva, Vishnu, Brahma, each may be
> First, second, third among the blessed Three."

Brahma (Fig. 2) is the creator and the father of all, commonly represented with four heads; Vishnu (Fig. 6) is the divine revela-

Fig. 2. BRAHMA.
(Fragment of a car. Musée Guimet.)

Fig. 3. SHIVA-TRIMURTI
Leaning on the linga, the symbol of the creative faculty.
(Fragment of a car. Musée Guimet.)

Fig. 4. SHIVA WITH PARVATI
On Nanda, the sacred bull (Musée Guimet).

Fig. 5. SHIVA DANCING SURROUNDED BY A HALO OF FLAMES. (Bronze Statue. Musée Guimet.)

Fig. 6. VISHNU NARASIMHA.
(Fragment of a car. Musée Guimet.)

Fig. 7. KRISHNA
As a shepherd lad playing the flute [the flute is missing]. (Bronze statue, Musée Guimet.)

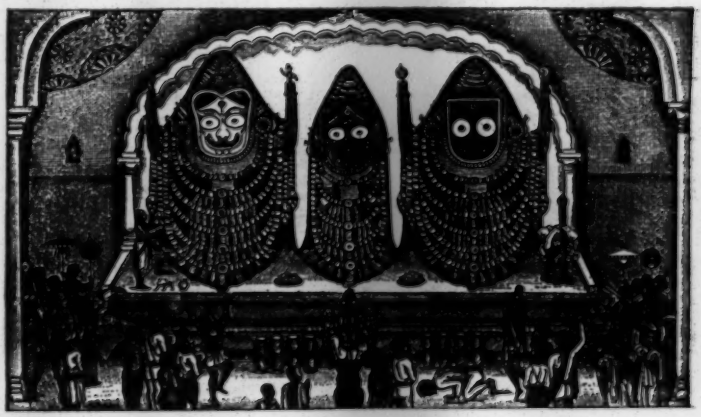

Fig. 8. JAGANNATH WITH HIS TWO COMPANIONS. (After Schlagintweit.)

Fig. 9. LAO-TSZE—BUDDHA—CONFUCIUS.

D, D, D, philosophers, and E a hero. F, the Chinese dragon, covered with the sacred tortoise shell. G, G, G, H, Gods. I, K, L, M, Demons.

After an old Chinese painting, reproduced by Kirchner, and from Kirchner by Pickart.]

tion manifesting itself in incarnations called "avatars"[1]; and Shiva (Figs. 3, 4, 5) is the destroyer and regenerator, the transformer.

Vishnu in his incarnations, especially as Krishna (Figs. 8 and 11) and as Jagannâth[2] (Fig. 8), is dearest to the Hindu heart, for he is the God that has become flesh, and he is full of love and compassion. Brahma and Shiva, not unlike the Jehovah of the Old Testament, are gods of wrath, but the Vishnu (the Hindu Christ) is full of compassion, of meekness, and humility. This is illustrated in a crude legend which according to a story from the Bhâgavata-purâna runs as follows:[3]

"A dispute once arose among the sages which of the three gods was greatest. They applied to the greatest of all sages—Bhrigu—to determine the point. He undertook to put all three gods to a severe test. He went first to Brahma and omitted all obeisance. The god's anger blazed forth, but he was at length pacified. Next he went to the abode of Shiva, and omitted to return the god's salutation. The irascible god was enraged, his eyes flashed fire, and he raised his Trident weapon to destroy the sage. But the god's wife, Parvati, interceded for him. Lastly, Bhrigu went to the heaven of Vishnu, whom he found asleep. To try his forbearance, he gave the god a good kick on his breast, which awoke him. Instead of showing anger, Vishnu asked Bhrigu's pardon for not having greeted him on his first arrival. Then he declared he was highly honored by the sage's blow. It had imprinted an indelible mark of good fortune on his breast. He trusted the sage's foot was not hurt, and began to rub it gently. 'This,' said Bhrigu, 'is the mightiest god; he overpowers his enemies by the most potent of all weapens—gentleness and generosity.'"

In spite of the lack of dignity that marks this myth, it reminds one of the story of Golgatha; there, too, the wounds in the breast where the lance pierced the Crucified, became, together with the four other wounds, the symbol of the highest and divinest holiness.

Krishna is God manifesting himself as the divine hero, teacher, and saviour. The Krishna legends bear many strange resemblances

[1] Vishnu incarnates himself in ten avatars. The illustration (Fig. 6) represents him as Narasimha, or the lion-man, according to the legend that the heretical king Hiranyakasipa, ridiculing the idea of Vishnu's omnipresence, asked mockingly: "Is Vishnu in this pillar?" whereupon the pillar was rent asunder, the god came out in the shape of a lion-man and tore the scoffer to pieces.

[2] Jagannâth is commonly misrepresented in Christian countries, and there is much talk of the custom of people throwing themselves under the wheels of the big Car of Jagannâth. There is no truth in the tale. Says Sir Monier Monier-Williams, an enthusiastic worker in the field of Christian apologetics: "It is usual for missionaries to speak with horror of the self-immolation alleged to take place under the Car of Jagannâth (Krishna). But if deaths occur, they must be accidental, as self-destruction is wholly opposed both to the letter and spirit of the Vaishnava religion." (*Brahmanism and Hinduism*, p. 118.)

Jagannâth, the Vishnu incarnation of mercy and compassion, always appears with two companions. As to their grotesque appearance, we must consider that the Hindu tries to describe the divine by things uncommon and extraordinary.

[3] See Sir M. M. Williams's *Brahmanism and Hinduism*, p. 46.

Fig. 10. The Christian Trinity after the Conception of Old German Masters.
(Reproduced from Muther.)

Fig. 11. Krishna Nursed by Devaki.
After an old and richly-colored Hindu painting. [Reproduced from Moore's Hindu Pantheon, plate 59.]

Fig. 12. Quan-Yin.
Buddha's incarnation as a mother's love.
White Chinese Porcelain (Musée Guimet).

Fig. 13. The Buddhist Trinity (Japanese).
The Buddha, the Dharma, the Sangha.
Carved wood; Musée Guimet.

Fig. 14. The Christian Trinity
From the *Iconographie Chrétienne*. [Reproduced from Bastian's *Ethnol. Bilderbuch*, plate xvii.]

Fig. 15. Mary's Coronation.
By Ambrogio Fossano, called Borgognone. Formerly in the S. Simpliciano at Milan, now at the Brera. [After Lübke.]

Fig. 16. The Coronation of Mary.
After H. F., an unknown Old German artist of Augsburg. (Reproduced from Muther.)

Fig. 17. The Trinity.
From Hans Schaufeleius's prayer book *Via Felicitatis*. (Reproduced from Muther.)

Fig. 18. The Holy Trinity in the Vatican.
After Pietro Berrettini. Reproduced from *Il Vaticano*, plate xx.

to stories in the lives of both Buddha and Christ. The most curious among them are Krishna's escape from a massacre of children, arranged by a Hindu Herod for the purpose of killing the newborn god, and his transfiguration shortly before his death. Pictures of the Krishna child at the bosom of his mother remind us very much of similar subjects in Buddhistic and Christian art (Compare Fig. 11 with Fig. 12). Well known is also the thoughtful legend that while Krishna plays the flute (Fig. 6), every one of the dancing shepherdesses believes that the swain whom she embraces is the god himself.

The Buddhist trinity (Fig. 13) is different from the trinity of the Brahmans. The Buddhists take refuge in the Buddha, the Dharma, and the Sangha, every one of them being a manifestation of the bôdhi, the enlightenment that leads to the salvation of Nirvâna. Not exactly the same, but a similar idea, is expressed in the doctrine of the three personalities of Buddha: (1) the Sambhôga-kâya, the personality of bliss, which means Buddha as the eternal law of the bôdhi; (2) the Nirmâna-kâya, the personality of transformations, or Buddha as he manifests himself in evolution; and (3) the Dharma-kâya, the personality of religious truth, which is the unfoldment of Buddha in the Buddhist doctrines.[1]

In China there is a peculiar trinity of the great religious leaders, Lao-Tsze, Buddha, and Confucius (Fig. 9). Although Taoists, Buddhists, and Confucianists are not free from jealousy among themselves, the systems of the three masters are not regarded as antagonistic but rather as complementary. Their trinity appears to be accidental, and yet it, too, is an expression of the triune relation of philosophy, religion, and ethics.

The Christian doctrine of the trinity was definitely settled at the time of the Council of Nice. In the beginning of the Christian Church there was a wavering between two conceptions, one of which may be called gnostic, the other canonical. The gnostic conception, formed after the pattern of father, mother, and child, represented the Deity as a trinity of (1) God the Creator, (2) Sophia or the Divine Wisdom, and (3) the Messiah, also called the son of David, the son of man, the son of woman, and the son of God. Some gnostic authors use the terms Sophia and Logos as perfect synonyms, but among the Christians of the third century the

[1] In the Buddhist mythology of China and Japan the trinity idea is very prominent. A Chinese work of five thin volumes, kindly presented me by Mr. Jos. M. Wade of Boston, contains among its numerous illustrations of Buddhist saints and deities a great number of trinity figures. The title of the work shows four characters, signifying "Buddha-Image Table-Collection," which means "A Collection of Illustrations of Buddhist Images."

term Sophia is entirely abandoned, and the trinity of God the Father, God the Son, or Christ, as the incarnation of the Logos, and the Holy Spirit, becomes firmly established as the canonical doctrine of the Church (Figs. 10 and 14–18). Nevertheless, the gnostic conception of Sophia, the bride of God, reappears in the deification of Mary, who sometimes, although rarely, takes the place of the Holy Ghost (Fig. 17), and sometimes is represented as an additional person in the trinity (Fig. 15), which, however, in artistic representations, makes the Holy Ghost appear as the relation that obtains between God, Christ, and Mary.[1]

The Brahman, the Buddhist, and the Christian trinity conceptions are in many respects very different, but the more instructive and remarkable are their agreements which teach us that the trinity idea is deeply founded in the nature of things.

[1] The old Christian Trinities (e. g., Fig. 14) bear a close resemblance to Hindu representations of the Trimûrti. The old German Masters represent God the Father as an emperor holding counsel with his son, the king, on the government of the world (e. g., Fig. 18). There are a few pictures which seem to convey the idea that God the Father, Mary, and Christ form a trinity (see Fig. 15), but the instances in which (as in Fig. 17) the Holy Ghost is entirely replaced by Mary, are rare.

THE MECHANISM OF SYMPATHY.

BY HENRY F. RULISON.

WHEN WE SEE a mother look for the last time upon the face of her dead child, when we see her tears and hear her sobs and cries, there wells up in our breasts a flood of emotion, we are filled with grief, sorrow overflows our hearts, and tears dim our eyes. We hear of the good fortune of some acquaintance and are at once filled with joy. We weep with those that weep and laugh with those that laugh.

These are familiar examples of the manifestations of sympathy. The common notion of sympathy is that it is a feeling corresponding to that which another feels, it is literally a *fellow-feeling* with others in their varied conditions of grief or joy. It is an agreement of affections or inclinations, or a sameness of natures, which makes persons pleased with one another or with the same subject of thought.

By most people sympathy is thought to be restricted to the hearts of the human family, and particularly to individuals of the same race. We hardly ever think that a bird feels sorry for its wounded mate, or that a fox that has caught a good fat hen is congratulated by his fellow-foxes. We never think, as did Pliny, that plants sympathise with one another. It is only the poet who can say that "the sympathies and affections of plants blossom into marriage; the petals of flowers are their wedding dresses, and their lovely hues and sweet odors are their gayeties and smiles and music." We never think of the ocean and the land as lovers, having that likeness of natures which makes them pleased with each other. It is only the poet that can say, as did Alexander Smith, "The sea is a bridegroom, the shore his wedded bride. In the fulness of his marriage joy he decorates her tawny brow with shells, retires a space to see how fair she looks, then proud, runs

up to kiss her." We never expect, as we enter the inorganic world, the world of coal, and iron, and rock, to see manifestations of sympathy. Yet the chemist finds here what appears to be warm sympathy and enduring affection. Many of the most pleasing experiments in chemistry and physics depend upon the apparent fact of sympathy. Dr. Mason Good says, "It exists between atom and atom, and the philosopher calls it attraction; it exists between iron and loadstone, and every one calls it magnetism." So that chemistry and physics are only a sportive, poetical way of telling the story of the human heart, its life, its intelligence, its emotions.

It is the object of this paper to show that only by the study of the so-called dead world around us can we really know what sympathy is, its exact nature, its process of action, and its development from unconscious sympathy in matter to conscious sympathy in mind. The field is an inviting one, full of surprises and pleasures, of instruction and philosophy, and to it the thoughtful attention of the reader is invited.

Let us go back to our childhood sports, to the old orchard and the old apple-tree, and see again the swing suspended from one of its branches. The mere mention of the swing sets our heart a-beating in sympathy with its motion. Did you ever carefully observe this motion and the process of swinging? A little girl sits in the swing, and a little boy stands just behind her to push. He gives a slight push and she swings away. She swings back, and he again gives a stronger push. She again swings away farther than before. And so, back and forth, she swings. Should he push before she gets fully back, he would stop the motion of the swing; should he push too slowly or too quickly, there would be an interference with the natural motion of the swing. He must push exactly at the moment the swing is ready to go away from him. In this way the swing has an even, steady motion, going away and coming back in equal intervals of time. It swings back and forth, say, thirty times a minute; the boy must therefore push fifteen times every minute. This swinging motion is called, in the language of science, a vibration.

A little way off is another swing, longer than the one just considered, and we notice that it takes longer for it to vibrate back and forth. This swing vibrates, say, twenty times a minute, and the pushes are ten a minute. Should the boy push eleven times a minute, or nine times a minute, he would stop the swinging. He must push exactly ten times a minute, no more, no less.

Anything which, when moved out of place, comes back again

to place, in equal intervals of time, vibrates. Examples of vibration are seen in the movement of the pendulum of a clock, the balance-wheel of a watch, the shuttle of a sewing-machine, the piston of a steam-engine, the waves upon the surface of water, etc.

Take a large tuning-fork and fasten it firmly by its handle to a table, so that its prongs shall stand upwards. Strike one of the prongs. See how it vibrates back and forth, so swiftly that the eye can scarcely follow its rapid motion. At the same time there is heard a musical tone of a certain pitch. Take a small piece of cork and suspend it by a fine thread. Hold the cork close to the vibrating prong. The prong pushes the cork and sends it flying away. The suspended cork is a swing, and the vibrating prong is the boy that pushes it. But the prong strikes out many times oftener than the cork can swing back and forth in a second. If the thread be shortened, that is, the swing be made shorter, a length may be found so that the vibrations of the prong and of the cork will be the same in number per second. In the case of the swing and the boy, the boy timed his pushes to agree with the vibrations of the swing; in the case of the fork and the cork, the vibrations of the cork are timed to agree with the pushes of the prong. In other words, the cork-swing is keyed up to the pitch of the fork.

Here are two tuning-forks of exactly the same pitch, that is, they vibrate the same number of times in a second. Each is fastened by means of a brass plate to the top of small boxes, open at the ends, and made of thin pieces of wood. The boxes are called sounding-boxes. When the forks are struck, they vibrate and force the top and sides of the boxes to vibrate with equal rapidity. The result is a very loud musical tone of the same pitch as the forks. Place one of the boxes on the table and hold the other in the hand. Strike the fork of the one held in the hand, and it emits a loud sound. While sounding, bring it near the silent fork attached to the box on the table, but not in contact with it. Allow them to continue in this position for a few seconds, and then stop the vibration of the fork in the hand—the tone is still heard. The fork on the table has taken up the vibrations of its neighbor and is now sounding in its turn, a faint, mellow tone. The vibrations of the fork in the hand have been transferred to the fork on the table. How is it done?

There is around us a substance capable of transmitting the motion of a tuning-fork, or of any vibrating body, to great distances with great rapidity. This substance is the atmosphere. The atmosphere is composed of very small particles placed very near

to one another, but not actually touching, so that each particle can swing back and forth with perfect freedom. Each particle is, in fact, a little swing. But they have this advantage over ordinary swings—they are not held in place by threads of different lengths, and so can vibrate just so rapidly, and no more, but are held near one another by the attractive power of the earth, and kept apart by a repulsive force which exists between them, an arrangement which permits them to swing slowly or rapidly. When the prong of the fork vibrates it strikes the particles of air next to it, which push other particles, which in turn push still other particles, and so on. Each particle swings a little ways, strikes its neighbor in front of it, springs back to be struck by the neighbor back of it, and so on. And in this way motion travels, like waves, through the air, outwards in all directions from the vibrating fork, and thus particles of air at a distance from the fork vibrate as rapidly as the prongs themselves. And when the air-waves made by the fork in the hand reach the fork on the table they strike its prongs and cause them to vibrate. "It is easy to understand this. The waves of air of the one fork can affect the other, because they are perfectly timed. A single wave causes the prongs of the silent fork to vibrate through a very small space. But just as it has completed this small vibration, another wave of air is ready to push it. Thus the small pushes add themselves together. The pushes, all delivered at the proper moment, all properly timed, give such strength to the vibrations of the fork on the table as to render it audible." One fork, then, can cause another at a distance to vibrate with the same form and speed of motion as itself has. This sameness of motion is called sympathetic vibration. Two bodies vibrate in sympathy, then, when the motion of one is similar to and as rapid as the motion of the other. Instead of a tuning-fork to set up motion among the particles of air, any vibrating body may be used, as piano-strings, harp-strings, the reeds of an organ, the tongue of a jew's-harp, a bell, etc.

All have heard of the harp of a thousand strings. Let us, in imagination, make one. Some of its strings shall be long, some short; some large, some small; some light, some heavy; some stretched tightly, some loosely; no two alike, but all capable of vibrating in different times and thus of giving out different tones, and all mounted upon a large sounding-box or sounding-board—a most wonderful musical instrument. Let us now place this harp of a thousand strings at one end of a room and place near it a young man who has good, sharp ears. At the other end of the room we

will place a piano, a violin, a flute, a cornet, a bugle, a whistle, a drum, and other instruments, each having a person to play upon it. The young lady at the piano strikes C, the young man at the harp hears C sounding in the harp. She strikes E on the piano, he hears E in the harp. She slowly plays "Home, Sweet Home," he hears "Home, Sweet Home" in the harp. And now a simple melody is played upon the flute; the young man hears the same melody in the harp. The drum is now struck, and the heavy, long strings of the harp give out the same sound. And so for the other instruments. As the strings of the piano vibrate, waves of motion pass through the air to the strings of the harp and cause some of them to vibrate. All strings of the harp so constructed and keyed-up as to vibrate the same number of times per second as those of the piano vibrate in sympathy with them, and give out the same tune as is played on the piano. Waves of air from the cornet pass over to the harp, certain strings of which vibrate in sympathy and give out the same tune as is played upon the cornet. In like manner all the musical instruments play upon the harp through this principle of sympathetic vibration. The harp is so constructed that it is in sympathy with all the instruments, and can reproduce all the tones and tunes they give forth.

This harp of ours is not altogether a creature of the imagination; England's great scientist, John Tyndall, says: "If you open a piano and sing into it a certain string will respond. Change the pitch of your voice; the first string ceases to vibrate, but another replies. Change again the pitch; the first two strings are silent, while another resounds. Now, in altering the pitch you simply change the form of the motion communicated by your vocal chords to the air, one string responding to one form and another to another."

Now, suppose this wonderful harp of ours were a conscious musical instrument, that it could feel its own tones or vibrations, and know its own tunes as they are caused in it by the other musical instruments. And suppose, further, that each of the other instruments were a conscious instrument, that it could feel its own tones or vibrations and know its own tunes, would not the harp sympathise literally with the piano, and the flute, and the cornet, and the drum?

That this wonderful harp is not wholly impossible of realisation is apparent when we come to think of the telephone. In fact, the telephone is a much more wonderful mechanism than our imaginary harp, wonderful in its simplicity and ability to respond sym-

pathetically to impressions made upon it by waves of air. The band may play, ducks may quack, dogs bark, cats mew, birds sing, and boys whistle, all at the same time, in the presence of one telephone, and the medley of sound will be transmitted miles distant, through the medium of a single small wire, to be exactly reproduced in another telephone. The two phones are constructed precisely alike, and what thrills one thrills the other in the same way, one vibrates in sympathy with the other. Now, if each phone were a conscious phone, capable of feeling and knowing its own vibrations, the feelings and emotions of each would be the same, there would be a literal sympathy between them. The joy of one would be the joy of the other, the grief of one would be the grief of the other, they would literally be "two souls with but a single thought, two hearts that beat as one."

This, then, is the philosophy of sympathy, that two objects constructed on the same plan, made of similar materials, keyed-up, so to speak, to the same degree of tension, subjected to the same forces, will vibrate in sympathy with each other. And if the two objects are conscious objects, an act of one accompanied by a feeling will arouse the like feeling and action in the other.

The sun is composed of various elements whose particles are vibrating with great rapidity. The earth has in and around it the same elements whose particles are capable of vibrating with the same rapidity. Between the sun and the earth, and filling all space, is a medium capable of transmitting waves of motion from the sun to the earth, and causing earth-particles to vibrate in sympathy with sun-particles. So that storms and other disturbances in the sun are accompanied by storms and electrical disturbances on the earth. And what is true of the sun and the earth is also true of all other heavenly bodies. Thus, as Tyndall says, "nature is not an aggregate of independent parts, but an organic whole." And thus throughout the universe there is a bond of sympathy which unites into one grand whole the myriads of worlds. It is no poet's dream that makes some lowly flower rejoice in the warmth of the sunlight, that makes the valleys laugh when kissed by the raindrops, that makes a little bird sing in some human breast when all nature smiles and is happy. Given a mechanism that can vibrate in unison with the varied motions of nature, and at the same time be conscious of these motions, and this mechanism is in literal sympathy with the thrills of the universe. And we have such a mechanism—it is a human being—man. Hear Tyndall again: "And thus is sentient man acted upon by nature, the optic, the auditory, and

other nerves of the human body being so many strings differently tuned and responsive to different forms of the universal power."

We are now prepared to study the phenomena of sympathetic vibrations accompanied by consciousness or feeling, as exemplified in ourselves and other animals.

The nervous system is the mechanism by means of which, and through which, sympathy is established between man and man, and between man and the world outside of man. It is a mechanism much more wonderful and complex than our harp of a thousand strings. The limits of this paper will not permit us to study its organisation in detail, nor to notice all the modes of its action. But enough will be presented to enable us to see that the principle of sympathetic vibration is the key which unlocks and opens up to us the apparent mystery of sympathy.

The nerves are of two kinds, nerve cells, and nerve fibres. The nerve cells are small, irregular masses of grayish color. They are so constructed that they can respond to the various motions that may come to them, as do the strings of a harp or the vibrating plate of a telephone, that is, they can vibrate in sympathy with other cells or motions. They can also originate motion, because in the process of waste and repair which accompanies their nutrition, molecular changes involve atomic and molecular vibratory motions. As each string of a piano, on account of its structure and tension, can vibrate only in one way and emit but one kind of pitch or note, so each cell, on account of its structure and quality of tissue, which it has by inheritance and education, can originate but one form of motion and vibrate to but one kind of impression. The nerve cells are connected with one another by white nerve threads or fibres. The nerve fibres do nothing but transmit motion from cell to cell. The cells may be thought of as telephones, and the fibres as wires connecting them.

There are millions of nerve-cells and millions of connecting nerve-fibres. The cells and fibres are found in every organ of the body; they are found clustered in large masses in the spinal cord and brain, which are called nerve-centres. If we think of the nerve-cells of the body as telephones, the nerve-fibres as telephonic wires, then the brain is a telephonic central office where connexions are made between the various telephones.

As one telephone vibrates in sympathy with another through the medium of the connecting wire, so the nerve-cells and centres vibrate in sympathy with one another through the medium of the connecting nerve-fibres. But unlike the sympathy between tele-

phones, there is a literal sympathy between the cells and nerve-centres of the body, for there is associated with the vibration of nerve-cells a most wonderful phenomenon, that of feeling and consciousness. The cells not only vibrate, but they know their own states of vibration. How it is that a certain mode of motion results in a certain feeling is a mystery no one has solved. But the fact is that there is a feeling, and that the feeling changes as the form of motion changes.

Motion gets into the brain from the outer world through the medium of certain special nerve-organs called the organs of sense. For example, the ear is such a special sense-organ. The cells and fibres of the internal ear are of many sizes and lengths, and many thousand in number, so that, no matter what kinds and qualities and rapidities of sound-waves may come to them, some are capable of absorbing the same motion, of vibrating in sympathy. But this motion does not end in the ear. The nerve-cells of the ear are connected with like ones in the brain. So that the motion of the fibres and cells of the ear are transmitted to the cells of the brain; and the cells of the brain vibrate in sympathy with those of the ear, and thus with the sounds in the world outside the brain. And the motion of the cells of the brain thus produced result in a state of consciousness we call a feeling, or sensation. We are conscious of noises and musical tones of different pitches, and qualities, and degrees of loudness. And this is hearing. Now, if the strings of a piano were conscious beings, if they could feel and know their own motions as they vibrate, the piano and the brain would literally sympathise with each other. Substitute for the piano a man. He feels like laughing, and he laughs. Waves of air from his vocal chords speed through the atmosphere and cause in the ear of another man corresponding vibrations. The motion goes on to the other man's brain, resulting in like vibrations in his brain, and he, too, feels like laughing, and laughs—laughs out of pure sympathy. And this sympathy is of the simplest kind; "it is a resonance, or unconscious reproduction or imitation of another's feeling."

Another example: At the back of the eye is a delicate substance called the retina. It is composed of nerve-cells and fibres in the form of rods and cones, of great complexity. The cells are of various shapes and sizes, the rods of different sizes and lengths. They are all connected by the optic nerve with the cells of the brain. Now, what is called light, or color, is thought to be only certain forms of wave-motion running through a medium called ether, which fills all space not occupied by other matter. In the

color called red as many as four hundred and thirty trillion waves of ether strike the retina every second. Violet sends out seven hundred trillion per second. The larger cells and the longer rods and cones of the retina are made to vibrate by the slower waves of light, and the smaller cells and shorter rods and cones are made to vibrate by the more rapid waves of light, just as a long swing is made to vibrate by slow pushes, and a short swing by fast pushes. Now, suppose there is placed before the eye a red rose, green grass, a yellow buttercup, the blue sky, and a modest violet. Red waves of light from the rose enter the eye and certain cells, rods, and cones of the retina are put into sympathetic vibration. Green waves from the green grass, in like manner, put other cells, rods, and cones into sympathetic vibration. In like manner other cells, rods, and cones of the retina are made to vibrate in sympathy with the waves of motion from the buttercup, the sky, and the violet. For every form of wave of light that enters the eye there is a corresponding form of motion in the retina. But the motions do not end in the retina, they are transmitted through the optic nerve to the cells of the brain, and corresponding motions are set up in them. So that the cells of the brain vibrate in sympathy with the roses, the grass, the sky, the buttercups, the violets, and with all the colors of nature. Still further, the motion of the cells of the brain are accompanied by consciousness, and there are as many forms of consciousness as there are forms of waves of light. Now, if the roses and the buttercups and the violets had feelings determined by their respective colors, we should feel as they feel, there would be a literal sympathy between us and them.

What is true of the ear and the eye as instruments for transmitting certain forms of motion to the brain and thus arousing certain feelings within us is true of the other nerves of the body. From the various organs of the body a multitude of vibrations are transmitted to the brain without intermittance, producing in us a continuous but ever-varying state of consciousness—our personality. So that our feelings of bodily comfort or pain, of hunger, thirst, muscular tension, etc., are but various forms of sympathetic vibration. So universally is this view entertained that it is common to say that the organs of the body sympathise with one another, through the medium of the sympathetic nervous system, and that our varying moods and emotions depend upon the varying conditions and actions of the bodily organs. So it is true, as said before, that the nerves of the human body are so many strings, differently tuned and responsive to different forms of motion. We thus get

feelings or ideas of odors, tastes, temperature, hardness, smoothness, colors, etc. The world close around us and the distant sun and moon and stars are continually sending into us waves of motion of different forms and qualities and degrees, causing us to tremble, to vibrate, to thrill in every nerve, producing in us an infinite number and variety of feelings; feelings as great as nature feels, full of joy if she be joyful, full of sadness if she be sad.

As we have seen, the nerve fibres from the eye are distributed to certain nerve cells of the brain, those from the ear to other cells of the brain, those from the nose to still other cells, etc., so that different receptive parts of the brain have different forms of vibration, attended by different forms of feeling. But this is not all. The various parts of the brain are themselves connected by nerve fibres. For example, the cells which vibrate under the impulses of waves of light are connected with the cells which are moved by waves of sound, so that the feelings accompanying a disturbance of the eye may be associated with feelings accompanying a disturbance of the ear. Thus, when we see a moving train of cars and hear the puffs of the engine, the two forms of feeling exist together, they are associated. In like manner other forms of feeling may be associated. Feelings produced by nerve disturbance in all parts of the body are thus made to blend into one compound feeling; it may be one we call bodily comfort, or unrest, or buoyancy of spirit. Compound feelings are the result of a blending of the vibratory motions of different nerve-cells through the medium of the connecting nerve-fibres, the form of vibration in one cell being superimposed upon that of another, as ripples upon larger waves or as overtone-vibrations of strings upon the fundamental. Another thing is made possible by this connexion of brain-cell with brain-cell. A disturbance of the cells connected with the ear may disturb the cells connected with the eye, even though the eyes themselves be not impressed. Thus, the music of a brass band will call up those feelings of sight we had when we saw the players. Though the players are out of sight, we can see them in the mind—their instruments, their dress, their orderly marching. Thus, feelings can revive other feelings with which they were once associated. A flash of lightning will revive the sound of thunder, and we seem to hear it even before it comes, that is, we anticipate the sound. And the sound of thunder leads us to think that it was preceded by lightning, though we did not see it. The first ten notes of "Old Hundred" will revive all the remaining notes, and we know the entire tune before it is sung. It is because the cells of the brain

are connected by "associative nerve-fibres, as Dalton calls them, that one idea revives another idea with which it was once associated. If an idea could not thus call up another idea, there would be no such train of ideas we call thought. Continuous, coherent thought is only possible when the cells of the brain are connected. Recollection and memory are made possible by this connexion, and impaired or destroyed by the degeneration or destruction of the connecting fibres.

> "Lulled in the countless chambers of the brain,
> Our thoughts are linked by many a hidden chain.
> Awake but one, and lo! what myriads rise!
> *Each stamps its image* as the other flies."

How wonderful is all this. The brain centres of the eye, the ear, and other organs of sense, at the base of the brain, are so many pipe-organs connected with the outer world, and played upon by it. Arranged on the surface of the cerebrum are the cells concerned in feeling and thinking, which are echo-organs connected with the pipe-organs below, and which are connected with one another by associative fibres. The organs at the base of the brain are played upon by pulses from the outer world, resulting in such harmonies as only the colors of the rainbow and the voices of angels can originate. The echo-organs reproduce the melodies in faint, mellow tones, with all the harmonic overtones. Even while the pipe-organs are silent, the outer world shut out, the echo-organs are sounding their sweet songs. Ideas, emotions, images, thoughts follow one another in an endless succession in the echo-organs. One melody in an echo-organ evokes another melody in another organ, one idea calls up another idea. And all so, because one part vibrates in sympathy with parts connected with it.

This view of the mechanism of associated feelings and thoughts is substantially that taught by modern psychology. Th. Ribot says: "If we take any adult person, in good health, and of average intelligence, the ordinary mechanism of his mental life will consist in a perpetual coming and going of inward events, in a marching by of sensations, feelings, ideas, and images, which associate with, or repel each other according to certain laws. Properly speaking, it is not, as frequently has been said, a chain, a series, but it is rather an irradiation in various directions, and through various strata; a mobile aggregate which is being incessantly formed, unformed, and reformed. Every one knows that this mechanism has been carefully studied in our day, and that the theory of association forms one of the solidest acquisitions of modern psychology."

But the half has not been told. The vibration of nerve cells results in a molecular decomposition of the cells themselves, accompanied by the liberation of energy. And this liberated energy manifests itself partly in heat and partly in the production of muscular contraction. Nerve-fibres, called motor nerves, run from the cells of the brain to all the muscles of the body. And the muscles are made to contract by the stimuli of this liberated energy carried to them by the motor nerves. So that every idea, every feeling, every thought is followed by some act, of some muscle, in some part of the body. All our movements and all the actions of the various organs of the body are thus produced by waves of energy which originate in, and proceed from, certain groups of cells in the brain, called motor cells. A disturbance in the motor cells of the brain is accompanied by a feeling or state of consciousness we call volition, or will. The motor cells are intimately connected with the feeling and thinking cells by nerve fibres, so that a disturbance in the feeling and thinking cells can be transmitted to the motor cells, and from thence to the muscles, causing bodily movements.

This fact of nerve structure makes it possible for us to understand how certain feelings are followed by certain definite actions; the feeling of hunger, for instance, followed by an act of eating; the feeling of pain followed by an act of crying-out; the feeling of joy followed by laughing or shouting. In every act there is not only the consciousness of the act itself, but an accompanying feeling which prompted the act. If a certain feeling finds expression in a certain action, and the feeling and the action are many times repeated, an association is established between the feeling and the motor cells, and a habit of acting in a definite way after certain feelings is formed. On the other hand, an action in another person will arouse in us the feelings that have always accompanied our acting in the same way, and having those feelings we are impelled to act as that person does. For example, we have a certain feeling and we yawn, and every time we have that feeling we yawn. We see a person yawn, and his act arouses in us the same feeling that has always accompanied our yawning, and we yawn. We unconsciously imitate that person's act because we feel as he feels—a case of the simplest form of sympathetic vibration. Again, we have a certain feeling and we weep. We hear a person weep, or see the tears flow down his cheeks, and his action and appearance arouses in us the same feeling and actions that have always accompanied our weeping, and we weep because we feel as he does, we weep out of sympathy with him.

Some amount of experience in the society of our fellow-men is needed to establish as association between the several feelings and their expression in action. But when the connexion is established a person automatically takes on the moods of hilarity, anxiety, or depression of those about him, and gives expression in acts of attitude, gesture, voice, etc. Says Sully: "A child suddenly placed in the midst of a group of merry children catches the prevailing tone of gladness. The spread of a feeling of indignation or of admiration, through a community, as a school or a nation, illustrates this tendency of a strongly manifested emotion to reflect itself in others. This fact is known as the contagion of feeling."

Contagious sympathy is well exemplified in some of the lower animals that associate in numbers. Herbert Spencer explains its mechanism in substance as follows: Members of a herd experience the attacks of an enemy. The emotion of fear aroused by the attack expresses itself in movements of escape, preceded and accompanied, it may be, by sounds of some kind. Each member of the herd sees the movements and hears the sounds of the rest of the herd, and the movements and sounds are more or less like his own movements and sounds, which are prompted by his own feelings of fear. Frequent repetition of attacks establishes an association between the feelings of fear and the signs of fear in himself and others, which signs, in time, become quite uniform as expressions of certain definite fears. After the association is established the movements and sounds cannot be perceived without there being aroused the feeling habitually joined with them when they were before perceived. Thus it is that the signs of fear may be excited in those to whom no fearful object is perceptible. And thus one member of a flock, himself alone and alarmed and making a sign of fear, seen and heard by the rest, excites in the rest the fear he is displaying, and the rest, prompted by their fear, begin to make like sounds and movements.

This explains how panics are brought about. A flock of birds towards which a man approaches will quietly watch for a while; but when one flies, those near it, excited by its movements of escape, fly also; and in a moment the rest are in the air. The same happens with sheep; when one runs, all run, and so strong is the sympathetic tendency among them that when one leaps over a stick held in his path, all leap at the same spot, though the stick be taken away. Dogs barking at night exemplify this tendency to sympathetic action. The panics in theatres, schools, and churches, upon the alarm of fire, are also examples of contagious smypathy.

By the inheritance of like body-structures and habits there must necessarily be aroused in progeny feelings and actions similar to those of progenitors, when subjected to the same environments and experiences. The association of certain feelings and corresponding actions becomes organic, and a quick, automatic, unconscious, and complete sympathy is established between the members of the same class or kind of animals. A drove of cattle, coming to a blood-stain in the road, one of their number smells it; whereupon he bellows and paws the ground. The others, seeing his actions and hearing his bellowing, begin to bellow and paw the ground. A brood of chickens under the care of the mother hen, hearing her cry of warning as some shadow flits over her head, will at once run under her protecting wings. And this they will do having never before heard the cry and being totally unconscious of danger. Having inherited a body-structure tuned in unison with the warning sound, the chickens respond as readily as does one tuning-fork to another. Says Sully: "That the child has a vague, intuitive knowledge of others' feelings seems shown by the fact that he responds to the smiles of his mother long before his own experience could have taught him to associate pleasurable feeling with this particular facial movement." The explanation of this "intuitive knowledge" seems to be that the child, having inherited the body mechanism of his mother, seeing her smile, responds in a definite action, and this action has been the action of the class to which he belongs for countless generations. Acts usually classed as instinctive find their explanation in the facts of heredity, and the possession of a mechanism which responds sympathetically to environments habitual to the race. Given a mechanism so constructed as to move in a definite way upon the application of a particular stimulus, when the appropriate stimulus comes along the mechanism responds accordingly. A windmill so constructed as to turn round a certain way when the wind blows will always turn round that same way when the wind blows.[1]

But animals of unlike classes or kinds, constructed upon different plans, inheriting unlike mechanisms and experiences, are like two tuning-forks of different pitches of tone. They cannot vibrate in sympathy with each other. The acts of one cannot call out like acts in the other, either because the feelings are unlike or because like feelings have become associated with unlike acts of expression. The playing of a march will at once impel men who

[1] In this connexion attention may be called to Mr. E. C. Hegeler's articles on the soul in *The Open Court*, Nos. 1, 15, and 127, which I have only seen after I had written the present article.

have marched to music to "fall in" and "keep step," but a cow will hear the same music and pass by with stolid indifference. No feelings of musical tones are invoked in her brain by the playing; her brain and the instruments do not vibrate in sympathy. The howling of a dog when he hears music clearly shows us that he and the music are in discord. The saying, "Birds of a feather flock together," is founded upon this fact of sympathetic vibration. It is only another way of saying that sympathy is found only between members of the same class or kind, because of similarity of structure.

In its well-developed form sympathy is more than a vibration in unison with the feelings of another, it is more than a resonance or imitative reproduction of manifested feeling. Says Sully: "It implies a distinct representation of another's pleasure or pain, and a disposition to make it our own, or to identify ourselves with the subject of it. It is a feeling for as well as with another." And Herbert Spencer says: "The degree and range of sympathy depends upon the clearness and extent of representation. So that there can be sympathy only in proportion as there is power of representation." Let us notice, briefly, the nature of representation upon which the higher forms of sympathy depend.

When a bell is struck it vibrates and emits a sound, and it continues to vibrate and emit a sound for some little time after the blow is struck which caused the vibration. When one looks at the sun for a few moments and then closes his eyes he still sees the sun, round and distinct. An image of the sun seems to be in his eyes. The retina continues to vibrate for some time after it is struck by the sun's waves of light. Not only is the retina set in vibration by the light of the sun, but the optic centres in the brain and the brain-cells associated with the optic centres are also made to vibrate, and the vibration of the brain-cells continues for some time after the retina ceases to vibrate. In other words, an image of the thing actually seen may be in consciousness for some time after the thing has disappeared. And multiplied experiences in seeing things, and thus causing the cells of the brain to vibrate, result in such a structural condition of the cells concerned in seeing that they acquire a habit of vibrating in a particular way. So that, though an object which has caused a vibration in the brain-cells is far distant, or utterly annihilated, the brain-cells, being now "keyed up" in unison with the motion of the annihilated object, still have the ability to vibrate as they did when under the stimulus of the object. And when they do thus vibrate, either

from molecular change in the process of nutrition or from stimuli from other cells associated with them, there is an image, more or less vivid, of the annihilated object. And this re-presentation of the image is called, in the language of psychology, representation. The brain is now able to act independently of external stimulation, having acquired a habit so to act through previous exercises under external stimulation. Beethoven was able to represent musical sounds after he had lost his hearing. Says Spencer: "A sympathetic feeling, in its higher form, is one that is not immediately excited by the natural cause of such a feeling, but one that is mediately excited by the presentation of signs habitually associated with such a feeling." Thus, though one may have nothing happening to himself to grieve about, when he sees signs of grief in another his own brain is excited, and a representation of his own grief when he manifested similar signs springs into being; he has a mental representation of another's inner experiences, he knows the other's condition of mind. And this image of another's grief may be strengthened and made vivid by the intuitions of grief he has inherited from a long line of ancestors who have had similar grief, and it may be strengthened and made vivid by the blendings of many of his own former griefs of a like form. Be that as it may, if the representation is vivid it takes firm hold on his mind, so that the suffering he witnesses is his own suffering, and he is prompted to make the same efforts to relieve the other's suffering as he would to relieve his own. He thus feels for as well as with another. And this complete identification of himself with another, this putting of himself in another's place, impels him to do toward and for that other as he would that other should do for him, similarly conditioned. "His feeling for another is a disinterested impulse which forms the foundation of a morally good and virtuous disposition of character."

Pleasure is experienced by us when we have representations of pleasure in others, and the feeling prompts us to generous actions. Pain is experienced by us when we have representations of pain in others, and the feeling prompts us to mitigate that pain.

The feeling of pity is a complex feeling experienced by us when we see in another a combination of misfortunes, as poverty coupled with helpless old age, the grief of parents over the criminal conduct of a son, an accident that cripples one for life, etc., though there exists no connexion, personal or social, with that other.

Sympathy with pain puts a check upon intentional infliction of

pain. Representations of pain and ignominy sufficiently vivid inhibits us from inflicting the penalty of death upon a convicted murderer. The corporal punishment of children is inhibited when sympathy is intense. Even the feelings of another are reluctantly wounded by unkind words when there is a high degree of representative power.

The limits of this paper will not permit an extended examination of all those altruistic sentiments having their basis and mode of manifestation in sympathy. The higher concepts and sentiments have their genesis in compound vibratory motions, the factors of which are found in the simpler forms of vibration of the brain-centres accompanied by elementary ideas and associated by connecting nerve-fibres. They may be likened (as is done by Mr. E. C Hegeler) to the composite photographs of Galton, in which the blending of several different faces on the same photographic plate produces an ideal image which has no counterpart in actual life. The sentiments of liberty, of patriotism, of justice, and of mercy and duty, are but developed forms of these ideal images. And as intelligence and the representative power develops, the sympathetic sentiments that find their satisfaction in conduct that is regardful of others, and so conducive to harmonious co-operation, should become stronger, and the golden rule find its realisation in the actions of men. The sacredness of life, of liberty, of property, should be more vividly felt as civilisation advances. The disinterested love of right presupposes the capacity and habit of representing and realising the interests and claims of others.

IN NUBIBUS.

THE COGITATIONS OF A SMOKING PHILOSOPHER.

BY THE REV. G. J. LOW.

PIPE I.

MY READING of late has been of a very mixed character. I have gone through the Report of the Parliament of Religions held in Chicago, and I have read over again the "Symposium on the Soul and the Future Life" which appeared in the *Nineteenth Century* Review some years ago. This symposium, to which men of all kinds of belief contributed, was led off and closed by Mr. Frederick Harrison, the high-priest of Positivism in England. The result of all this study is that I am utterly perplexed, confused, bewildered in my ideas as to religion.

As a corrective, I tried a paper read by some worthy cleric at a ministerial conference, on "How to Deal with Modern Thought," but I did not get much enlightenment. "Modern Thought"—and what *is* Modern Thought? Is the daily paper its expression? Take, for instance, this Sunday issue of the *Daily Annunciator*, with its forty pages, more or less, of reading matter. What food for the mind does it afford? What is the *menu* of this Feast of Reason? The *pièces de resistance* are, as a matter of course, political articles in abundance; some grave, some frivolous, some bland, some bitter. For the rest of the banquet we have: the records of some noble deeds,—a long list of atrocious crimes,—the sermon of the revivalist,—the lecture of the freethinker,—the séance of the spiritualist medium,—the last discovery of science,—the last gigantic swindle,—the last miracle at the shrine of some saint,—the last dynamite outrage. What a witches' cauldron is the daily paper! What a chaos is Modern Thought!

Now in the midst of all this Babel, what conclusion can be reached by a man whose religious opinions are in a state of flux? Like Kant, after discussing his "antinomies," I feel like saying: "Everything sinks under us. The most perfect Being, as well as the most insignificant, floats in mid-air without support . . . . to disappear without resistance."

But here is a report of the last session of "The American Congress of Liberal Religious Societies" (see *The Open Court*, p. 5139), perhaps I can find in it the *πού στῶ* amid all these floating, sinking, vanishing things. At this session Mr. E. P. Powell, of Clinton, N. Y., read a paper on "The Foundations of Religion,"—that's just what I am seeking. He says these foundations are "Headship, Dependence, and the Hope of the Future."—"God in higher terms is Father, Worship in higher terms is Love, and Creed in higher terms is Immortality."

Now, all this sounds very well: we might call it Religion reduced to its lowest terms. But the problem remains as perplexing as ever; these metaphysical abstractions hardly satisfy one. "Headship"—of what or of whom? "Dependence"—on what or on whom? "The Future"—for what or for whom? "God is the Father." But I want to know, Is there a God who is the Father? Is there a necessity for worship, whether you call it love or not?

I shall just put aside all this literature. I shall for the nonce shut up my books and stow away all my pamphlets and papers, and light my pipe and think. I must begin *de novo*, and it seems to me the whole matter resolves itself into the questions: "Is there a God?" and, "Ought we to worship Him?" Now, all these authors I have been reading, who have given various answers to these two questions, may be ranged under four heads. These are:

1. Theists, who say, There is a God, somehow, somewhere; and we ought to worship him.

2. Atheists, who say, There is no God and cannot be; and all worship is frivolous and vain.

3. Agnostics, who say, We don't know if there be a God or not, and we never can know; and to worship the unknown and unknowable is foolishness.

4. Positivists, who say, We do not know if there be a God; but we must act on what we do know: and we know that worship is an instinct and necessity of our nature; therefore let us worship something, though we don't exactly know what.[1]

[1] The Positivism alluded to is, be it remembered, that of August Comte, of whom Mr. Frederick Harrison is an ardent disciple; the French Positivism with its fantastic Worship and Rit-

Now, under which head do I come? Not under the first or second, because I can neither assert nor deny that there is a God. I must then be an agnostic. And yet, no. For an agnostic's creed practically amounts to this: "I don't know if there be a God, and I don't care; the unknowable is no concern of ours." Now, I *do* care. I cannot conceive of any problem of more moment to me than: "Is there a God or not?" The agnostic in physical science is not admired. Professor Proctor (*Familiar Essays on Scientific Subjects*, article "Oxygen in the Sun") speaking of the dark lines in the spectroscope, says: "A physicist of some eminence spoke of these phenomena in 1858 in a tone which *ought very seldom to be adopted* by the man of science. "The phenomena defy, as we have seen," he said, "all attempts to reduce them within empirical laws, and no complete explanation or theory of them is possible." Well, in 1859 these "inexplicable" phenomena were explained by Kirchhoff. Now, this eminent physicist of 1858 was an agnostic *in re* the dark lines, and as such incurs Professor Proctor's reproof. Why should the agnostic in any branch of philosophy be applauded? Surely, the question, "Is there a God or not?" is of at least equal importance to us as the question, "Is there oxygen in the sun or not?" No, I cannot be an agnostic; for though I don't know, still I do care. I would prefer to be classed among those of whom the Christian Scriptures speak, as "seeking after God if haply they might feel after Him and find Him."

Well then, there is nothing left but the last head, Positivism. Mr. F. Harrison and other followers of Aug. Comte argue that worship is a necessity of our nature. As Mr. Powell puts it, "dependence" prompts worship. Well, then, I will be a Positivist, and worship: but what or whom? To be sure, the masters of the school abound in suggestions:—"Worship humanity in the abstract." "Worship the Power that makes for righteousness.' "Worship Sweetness and Light." "Worship the True, the Beautiful, the Good." All very nice and very pretty; but too vague for me. I can't worship mere abstractions; I can't feel overawed by mere adjectives, even when dignified with the definite article and capital letters.

I have it! I will make "worship" an intransitive verb, and "worship" just as I "think" or "breathe." The next question is,

ual. This is a very different thing from the Positivism propounded by *The Monist* and *The Open Court*. In these, Positivism means that philosophy which bases everything on positive facts and traces all things to the bottom rock of experience. Such philosophy, I am free to admit, seems to me the only possible meeting-ground for religion and modern science.

how? What mode of worship shall I adopt? What shall be my ritual?—I have it again! I see by the *Daily Annunciator* that the clergy of the diocese have lately been holding "Retreats" and "Meditations": I will take my cue from them. My worship shall consist of certain hours of retirement in my library, during which I will cogitate on these problems while I smoke my pipe. Yes, my big meerschaum shall be my Altar of Incense. I will forbid all intrusion while I offer my burnt-offering. To quote the Christian Scriptures—for I see Mr. Harrison and the rest can do that very glibly—I will commune with my own heart, in my chamber; and while the incense ascends, I will jot down my thoughts on these subjects at each "Devotion."

[TO BE CONTINUED.]

THE DOVE.

RETOLD AFTER THE GERMAN OF ALBERT RODERICH.[1]

THERE was once upon a time a forest, and a youth was walking dreamily in the shade of its majestic trees. Suddenly he heard a wailing note, and, searching in the direction whence the sound came, he found a wood-dove caught in a snare. "Well, well," he said, "I should not wonder at all if that dove were a fairy who would grant me a wish if released."

With these thoughts, he cut the cord and let the dove go. His eyes followed her flight and he asked: "Supposing you are a fairy, shall I be allowed to make a wish?"

And really the dove was a fairy, whose delicate form hovered between the branches of the big oak tree; and she said: "Certainly I am a fairy, and I shall allow you three wishes."

"All right!" said the youth, "three wishes—such is the custom in fairy tales. But will they be fulfilled?"

"Yes," said the fairy, "they will be fulfilled."

What a delightful prospect for a young man! He thought: "First, I wish wealth; secondly, a palace to live in; and, thirdly, that I shall be granted three more wishes whenever I so desire."

"Your wishes are granted," said the fairy, and disappeared.

The youth went home, and there he saw a palace which he knew was his own. He entered and went right to the treasure-vault, for he was familiar with all the rooms of the mansion as if he had been living in it for ages. The treasure-vault contained as much money as he wanted. He spent his riches in pleasure and in charities just as he thought best. At any rate he enjoyed himself immensely until he became sick in body and in mind. While lying on his bed he thought of his chance of having new wishes granted. And he wished, first, for renewed health; secondly, wisdom, with

[1] From the *Fliegende Blätter*, Jan., 1897, by «ps.

all the learning which long years of studying would afford; and, thirdly, another chance of three more wishes.

His wishes were again fulfilled.

When he became sick of his books he longed for a quiet home, and he wished first, for a beautiful wife, and, secondly, for well-behaved, amenable children, and, thirdly, that he could have another chance of three wishes.

Thus he continued, always asking for the fulfilment of two wishes and requesting another chance of wishes whenever he should desire it.

This kind of life was very pleasant, but he grew sick of it because he had wished for everything that he could think of, and he no longer knew what to wish for next.

One day, when he had in vain troubled himself with the invention of new wishes without being able to find one, he grew very wroth and shouted in his anger: "What pleasure can there be in obtaining anything if these confounded fairies always grant it for the mere asking! I wish I had never wished anything."

As he uttered these words, he found himself standing at the very same spot, in the very same forest, under the very same conditions as before. The fulfilment of all his wishes was at once wiped out as though it had been a dream; and in the boughs of the gnarly oak the liberated wood-dove cooed merrily.

A BUDDHIST PRIEST'S VIEW OF RELICS.

BY THE EDITOR.

(Containing a Communication from the Rev. Seelakkhandha.)

SINCE THE PUBLICATION of *The Gospel of Buddha* I have been in receipt of many tokens of recognition from prominent Buddhists of various countries,—from His Majesty the King of Siam, from representative leaders of Japanese sects, and from several priests of Ceylon. Among the latter, the Rev. C. A. Seelakkhandha has shown me much politeness and a kind willingness to assist me in further studying the faith of Buddhists in their old sacred literature, as well as in the living mind of the present generation. A short time ago he sent me a casket in the shape of a dagoba. The casket contains another casket, also in the shape of a dagoba, and on opening the interior casket we see a little silver lotus containing a green gem in the centre, on a golden foil. Underneath the golden foil the tiny relic, not larger in size than a pea, lies hidden.

The donation of this relic was accompanied by a correspondence as to the conception of relic-worship among the Buddhists, which may be of general interest.

When some time ago the Rev. Seelakkhandha, on sending me a number of Pâli books, offered to procure for me a Buddha statue, Buddhist pictures, relics, or Pâli manuscripts, etc., I replied with reference to relics:

"In case you can let me have relics, I shall be very grateful to you, but I do not think that I would care for relics of human bodies, bones, teeth, or anything of that kind."

The Rev. Seelakkhandha wrote back:

"We do not regard the bones, etc., of ordinary human beings. But relics of Buddha and Arhats—lasting monuments of their virtue—are more valuable to us

than any worldly possession. These are very rare, too, and are obtained from the ruins of ancient Dagobas. I have with me a relic of Buddha found in a golden casket within a Dagoba (now in ruins), built 2,000 years ago. If you are willing to have this, I shall send it to you as a token of the regard in which you hold Lord Buddha and his religion. These relics are not used by us as ornaments, but they are held most sacred. There is nothing more valuable to a Buddhist than a genuine relic."

Thinking of the collector's interest that genuine relics possess, I wrote to Rev. Seelakkhandha: "As to caskets with relics enclosed, I expect that I should like to possess one of them, because it shows the reverence in which the Ceylonese hold their master and his saints." But I regretted having accepted the offer as soon as the letter had left my hands, and I wrote another letter the next day, which reads as follows:

"I wish to add a few words to my letter of yesterday with reference to the relics. I feel that if you were to send me one of those relics which you from *your* standpoint with good reasons consider so dear to you, you would be deprived of a treasure which would be less to me than it is to you. I would value these relics for historical reasons only. They would in my eyes be an evidence of the reverence in which you hold the memory of the Buddha and his saints, but otherwise they would only be to me objects of curiosity. According to my conception of Buddhism the most sacred relics we have of the Buddha and his saints are the words which they left,—the Sutras and all those ideas which can be verified in experience as valuable truths. Words, thoughts, and ideas are not material things, they are spiritual. It is true that they are transferred by material means in books and manuscripts, and by the air vibrations of sounds, but it is not the paper of the book, or the fibres of the manuscript, or the sound-waves, that are sacred, but the ideas which are conveyed by them. Thus, all the treasures which I regard as holy are spiritual, and not material. The worship of relics, be they bones, hair, teeth, or any other substance of the body of a saint, is a mistake. They do not possess any other value than the remains of ordinary mortals. The soul of Buddha is not in his bones, but in his words, and I regard relic-worship as an incomplete stage of religious development in which devotees have not as yet attained to full philosophical clearness. Now, it certainly is of interest to me to have evidences of the religious zeal of Buddhists. The keeping sacred of relics is *a symptom of their devotion*, but that is all I see in the use of relics. And considering that these relics are more to you than to me, I feel that I should not deprive you of them. Therefore, do not send me relics except it be on the stipulated condition that you know what I think about them. Otherwise you might regret afterwards having sent them to a man in whose conception they possess no religious value.

"In the hope that you understand me and do not misconstrue my objections to relic-worship, I remain, with kind regards, etc."

Rev. Seelakkhandha once more and at greater length explained his views of relics in another letter, as follows:

"When Lord Buddha entered Nirvâna about 2,440 years ago in the Park of Opawattana of the Mallawa Kings at Kusinagara, he wished that his bones (with the exception of the bone of the forehead, the four big teeth, the two jaw-bones,

and the chief bone of the neck) be scattered away from the body and remain unharmed on its cremation. He did this in order to leave some mark of remembrance to his followers who may with their help meditate on the personal virtues of the departed Teacher, because His life on this earth was comparatively short, i. e. eighty years. It happened according to his wish, and these bones or relics were of three kinds: (1) the largest about the size of a seed of rice and golden-colored; (2) the medium about half of a pea and pearl-colored; (3) the smallest of the size of a mustard seed and of the color of jasmine. There were sixteen measures (the Magadhan measure being little less than half a peck) of these relics which were distributed equally among eight kings who built Dagebas enshrining them in their respective dominions. Among these was King Ajatasatru of Rajagaha who buried his share of relics in Dagebas with the pomp and magnificence proper to such occasions. As it had been predicted that thereafter the pious king Asoka would be a participator in the benefits derived from these relics, Ajatasatru caused the greater part of them to be buried in the city of Rajagaha itself. King Asoka (a lineal descendant of Ajatasatru) who reigned at Patna about 2,222 years ago, caused these relics to be unearthed, and he is said to have built 84,000 Dagebas in different places in India enshrining them. He was a friend of his contemporary King Devanampiya Tissa of Ceylon about this time (2203 years ago), and he sent his son Mahinda, a Buddhist monk of renown, to this island [viz., Ceylon] to introduce Buddhism, which he accomplished with the co-operation of his royal friend and convert Tissa. Relics were now necessary to build Dagebas,—the usual monuments of religious zeal.

"Sumana Bhikkhu, a grandson of Asoka who accompanied Mahinda to Ceylon, was sent to Asoka to procure some relics. He brought with him as a present from Asoka to Tissa some relics in the very alms-bowl which Buddha is said to have used in His life-time. Tissa paid the usual honors to the relics and built Dagebas for them in many places in the island,—chiefly at Anuradhapura, his capital. Most of these are now in ruins, and when the relics contained in them are consequently unearthed, the process of building Dagebas is repeated. Some of the relics thus obtained are kept in the possession of people instead of being enshrined in Dagebas.

"The relic I am sending you is one thus obtained from the ruins of a Dageba at Apura and has been kept with me with great veneration,—offering flowers, incense, etc., morn and eve. I believe this to be a genuine relic of the Buddha. We reverence Buddha's relics as a mark of gratitude to Him who showed us the way to salvation and as a token of remembrance of the many personal virtues (bhagavat, arhat samyaksambuddha) which His life illustrated; and those of His disciples (i. e., Rahats) for similar reasons, and also to keep us reminded of their noble exemplary lives as results of Lord Buddha's invaluable doctrine.

"We do not believe that by 'worshipping' relics we attain Nirvâna, obtain any remission of our sins, or gain even merely any worldly benefit. These advantages are effected only by persevering in the path of virtue. But having in close proximity to us any monument or relic to perpetuate the memory of one who has been a unique example of virtue and benevolence, does, I venture to say, remove many obstacles in our way and make us inclined to follow that great Teacher. But one whose life is buried in sin, however enthusiastic he may be with regard to the outward ceremonial of religion, will not attain salvation.

"An example: During a season of drought even the foul water is taken for drinking purposes after purifying the same. The purification is effected by removing the mud and filth from the water and putting a kind of gem (*osakaprasada*) into the

water. The gem will not cleanse the water if it had not been first separated from the filth. In order to purify our heart it must be first freed from sinful thoughts.

"Again, as a fan helps us to feel the refreshing breeze, and a musical instrument to feed our ears with melodious sounds, so the relics, be they of Buddha or of his holy disciples, give us courage in our attempt to alleviate our misery. The mere keeping of the fan without fanning, or the musical instrument without playing, will give us neither the breeze nor the music.

"The biographies of great men help the rising generation to follow their footsteps, but the lesson is more impressive to a person of ordinary intellect by the presence of some material object connected with them. Also, it is usual that children, on the demise of their parents, preserve some articles used by them during their life-time as a token of the regard they entertain towards their beloved, and as a mark of gratitude. When you consider what I have said above, I hope you will get rid of any erroneous impressions which 'the image and relic worship' of the Buddhists may have left in your mind."

CORRESPONDENCE.

A VINDICATION OF M. ST. CÈRE.

To the Editor of The Open Court.

I do not pause to think whether my testimony can be of any value, but I think that it is a duty whenever one hears an accusation raised which one *knows* to be false, to say so.

I have just read M. St. Cère's letter in No. 486 of *The Open Court* and cannot resist the impulse to tell your readers that I have carefully followed the lawsuit in which—on M. Max Lebaudy's death—M. St. Cère has been entangled. He was the victim of a gross calumniation, and all the vile accusations that were printed against him in the reports of the press, and which were founded on *no facts* whatever, were proved to be erroneous. M. St. Cère has been declared innocent by the magistrates, and whoever reads the documents of the trial will see that the acquittal was not only due to the negative want of proofs, but to the positive certainty that the accusations were mere gossip.

M. St. Cère is no friend of mine; I know on the contrary that he is an adversary of the principles of international peace which I defend, because he is an ardent French patriot—whether his extraction be French or not—and fervently wishes to see France raised from her last defeat before she may lend her hand to universal pacification. The infamous accusation of being *a spy* is the very last that would have been believed by those who knew M. St. Cère, though it *was* raised, as it always is by a certain jingo press when the persecution spirit is let loose against some individual or other.

BARONESS BERTHA VON SUTTNER.

HERMANNSDORF, AUSTRIA.

NOTES AND BOOK REVIEWS.

Good times have been prophesied, but they do not come. Business is stagnant still, and confidence is lacking. And why? Where, as in banking, rigid watchfulness is called for, we observe careless negligence. Special favors are shown to relatives and friends against the express provisions of the law. Political nominations and appointments are made for the sake of rewarding stump orators and campaign workers. The advocates of a high-tariff policy are apparently resuming their old tinkering and bargaining with the silver senators. The spoils system is regarded as the natural condition of things, and deviations from the straight path of honesty are deemed pardonable. Such is the situation of the country! And with all that we are promised good times! But good times cannot come until honesty is recognised to be indispensable in all business affairs, in politics, and in religion.

Religion should be at the bottom of all exertions, of all business, of all politics; but religion is not church-going. Religion is honesty. Religion is not belief, religion is faithfulness. Religion is not observance of traditions, religion is taking life and its duties seriously. Do not make light of the doctrines of your church; face the problems of belief fearlessly and squarely. Dare to have a conviction, and aspire to have the right conviction which can stand criticism. Then take your conviction with you into practical life and apply it to politics and to business. You will thus within the circle of your influence contribute your share to the general prosperity of the country. Confidence is the condition of good times, and the prevalence of honesty is the condition of confidence.

C. Hermann Boppe of Milwaukee, the editor of the *Freidenker*, criticises *The Open Court* in an article on "The Belief in God and Immortality," (published in the *Freidenker-Almanach* for 1897) in which he quotes with approval Carl Heinzen, who says: "As Cortez burned the ships behind him, so radicalism burns the ships before itself—not only that fallacious boat of Charon on which those who in life are cheated out of truth and elysium, hope to attain truth and elysium after death, but also the air-ships on which man's imagination is supernaturally carried into heaven or eternity." Mr. Boppe condemns the policy of retaining the words "Religion," "God," "Soul," "Immortality," even though they may receive new contents and a definite scientific meaning. Without making any objection to the proposition that science is a revelation, he regards the solution offered in the Religion of Science as a compromise with superstition, which leads to paradoxical statements and will ultimately prove nothing but a waste of time. We have stated our answer to men of this type in our reply to Corvinus in Nos. 414 and 432 of *The Open Court*, and it seems unnecessary here to repeat our arguments. It is true that in the new

light which modern psychology sheds on the problem of the soul, we should for the sake of accuracy abolish the old modes of expression and invent new terms. But this method would lead to nothing, and would be little helpful for the progress of mankind. The new astronomy of Copernicus changed our world-conception in a similar way, and we ought to have altered a great number of phrases which are in common use, such as "sunrise" and "sunset," but the attempt to do so would simply have increased the confusion and would have availed little towards the proof of the new doctrine. In addition, these terms, in spite of being inaccurate, are quite justifiable, for to the people of a certain place the sun actually rises and sets. The facts are not changed, but the conception of the facts receives a new, a deeper, and a truer interpretation, which removes all the various insurmountable difficulties of the old interpretation.

If we had to invent new terms for every new phase in the discovery of truth, we ought to change our whole language every two or three centuries, and if we should condemn religion because it is in its beginning mixed up with superstition and its path leads through error to truth, we ought at the same time to condemn science, for science too, has to pass through phases of misconception and false theories. We might just as well abolish the universities as the churches, because the science of to-day is in many respects a combination of errors and confusion. In brief, since the facts of life remain the same in the new dispensation of the Religion of Science as they have always been, the absolute denial of the old formulations is not less erroneous than their implicit acceptance and the only way out of this dilemma is to purify the traditional notions and make religion more and more scientific. There is no need of burning our ships either before us or behind us.

Mr. Ohara of Otsu, Omi, Japan, the translator into Chinese and publisher of *The Gospel of Buddha*, writes that he will be pleased to supply copies of the Chinese edition of *The Gospel of Buddha* for seventy-five cents, and has sent us a number of copies in order to enable us to fill orders at once. We may add that the translation is in the modern Chinese-Wenli, not in the old style of the classical books of China, but in the language of to-day, of the official dispatches, of the translation of the Bible, of the Chinese newspapers, and of the commercial world in the Celestial Empire. It has received the endorsement and high praise of the Rev. Tan Tek Soon, one of the leaders among Chinese Buddhists of Singapore, who writes in a letter to H. Dharmapâla: "That it is apparently translated by an educated Japanese reflects the greatest credit on that enterprising nation, and is a noble repayment of the many debts of religious instruction received by the Japanese from their neighbors. . . . It will help greatly to advance the cause of religion among my countrymen."

Mr. Rama-Chandra Sen, Ex-Inspector of Schools at Oude, has briefly outlined his philosophy in a pamphlet entitled *Monado-Monoism* which he published some time ago in India. He has in the meantime made friends in the far West, among them Dr. R. Norman Foster of Chicago, whose enthusiasm induced him to publish a new exposition of Mr. Sen's *Monado-Monoism* in the shape of a pamphlet which presents in a condensed form the world-conception of such an Eastern thinker as is Mr. Sen.

Mr. Sen believes that all existence is conscious and is radiating in a supreme focus (p. 7). Conscious unconditioned feeling is the noumenon which as unconditioned cause unconditionally conditions itself (p. 9). Time and space are mo-

nadic; motion and matter atomic (p. 13). The simplest individual is a mineral (p. 16). A plant is a cognitional organism of the simplest kind (18). A brute is an emotional organism (p. 20). Man is a reflective organism higher than brute (p. 22). A spirit is a perfect cognitional being of the highest kind (p. 27). An angel is a perfect emotional being of the highest kind (p. 30). A cherub is a perfect reflective being of the highest kind (p. 33). A seraph is a perfect super-reflective being of the highest kind (p. 35). Lastly, the self-existing, sublimest focus is the eternal, unchangeable, unchanging Monon (p. 37), which is all-absolute and omniscient (p. 38). Man's stages of progress are marked as spirit-man, angel-man, cherub-man, seraph-man, and God-man. The God-man is the end of Nature's evolution and the *summum bonum* of religion (p. 48).

While we do not agree with Mr. Sen's methods of philosophising, we have found much that is of interest in his speculations which in their naïve simplicity remind us of the lofty constructions of various European thinkers who have attained great fame. We must also add that we recognise in Mr. Sen an earnest desire to embody in his system both the results of Oriental and Western research. The Roman proverb says: "*In magnis voluisse sat est.*" P. C.

The Biblical World of January, 1897, is, as most of its predecessors have been, full of interesting material, popular in tone, and yet scholarly. George B. Foster, speaking of "The Theological Training for the Times," says in bold honesty: "There are some things which ought to be said with the utmost freedom and frankness." And speaking of the theological student who is sorely perplexed by the dilemma of traditional faith and the results of scientific criticicism, he says:

"He is divided between two feelings: perplexed on the one hand by a suspi-
"cion that in clinging to traditional orthodoxy he may be untrue to himself; and
"checked on the other side by a fear that in discarding it he may be casting aside
"ideas essential to his moral and spiritual life. At such a time a divinity school
"should indeed be an *Alma Mater* to him. And if its work be destructive in part,
"as in part today it must, it is destructive for the sake of construction, the con-
"structiveness of Him who, though he destroyed, came not to destroy but to ful-
"fil."

Among other material of interest we note an article by George S. Goodspead on the "Ideal Childhood in Non-Christian Religions," in which he surveys the childhood legends of Buddha, Confucius, Zoroaster, Lao-Tsze, Krishna, and Mohammed. From the new Egyptian discoveries made by Mr. Petrie, the tablet of Amen-Hotep the Third is reproduced from a photograph by Brugsch, the inscription of which is of special interest because it contains on the back of the tablet a mention of the people of Israel. Among the accounts of other victories, the king announces that "Israel is desolated; his grain is not (i. e., his harvests are destroyed); Palestine has become as widows for Egypt (i. e., the people of the country have become as helpless as widows before the attacks of Egypt). Not the least valuable contribution is the editorial which insists on a thorough study of the Bible. The editor asks: "Is it not legitimate from the point of view of Sunday observance to use a portion of the day for the study of the Bible, and is it not legitimate to perform such study thoroughly and with a view to permanent results, as to perform it superficially and without expectation of accomplishing anything?" The author of the article, referring to the Revised Edition, condemns those as "criminally guilty" who would conceal the "light which God in his providence has shed upon his own revelation."